University of Colorado **Denver**

UNDERGRAUATE ACADEMIC CATALOG

2023-2024

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CU DENVER

CU in the City

In the heart of downtown Denver, CU Denver combines innovative research and accessible education with the advantages that only a dynamic urban environment can provide. On our campus where all are welcome, we offer the quality education that the University of Colorado is known for at an exceptional value. For 50 years, we have helped 100,000+ graduates achieve their goals—achieve yours too, with a degree from CU Denver.

Auraria Campus
1201 Larimer Street
Denver, CO 80201
(Speer Boulevard at Larimer Street)
Phone: 303-315-5969
Website: ucdenver.edu (https://www.ucdenver.edu)

How to Use this Catalog

The CU Denver Catalog is comprised of four main sections, About the Catalog and Archive Information (p. 8), About CU Denver (p. 9), Undergraduate Catalog (p. 36), and Graduate Catalog (http://catalog.ucdenver.edu/cu-denver/graduate/).

The About the Catalog and Archive Information (p. 8) provides information about the published catalog and information to find previous versions of the catalog.

The About CU Denver (p. 9) section provides information about CU Denver that is beneficial for undergraduate and graduate students, faculty, staff, and our campus community. The information in this section of the catalog includes:

- Campus (p. 12)
- Administration (p. 16)
- Related Organizations (p. 18)
- Student Services and Other Student Resources (p. 19)
- University Policies (p. 30)

The Undergraduate Catalog (p. 36) section provides information focused towards the undergraduate student population including:

- Admissions (p. 37)
- Student Finances (p. 50)
- Tuition Classification (p. 53)
- Records and Registration (p. 55)
- Academic Policies and Procedures (p. 109)
- Undergraduate Advising and Other Student Services (p. 112)
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- Graduation (p. 126)
- Schools, Colleges, and Departments (p. 129)
- Courses A-Z (p. 1005)
- Programs A-Z (p. 1289)

The Graduate Catalog (http://catalog.ucdenver.edu/cu-denver/graduate/) section provides information focused towards the graduate student population including:

- Information for Graduate Students (http://catalog.ucdenver.edu/cu-denver/graduate/information-graduate-students/)
- International Admissions (http://catalog.ucdenver.edu/cu-denver/graduate/international-admissions/)
- Student Finances (http://catalog.ucdenver.edu/cu-denver/graduate/student-finances/)
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- Courses A-Z (http://catalog.ucdenver.edu/cu-denver/graduate/courses-a-z/)
- Programs A-Z (http://catalog.ucdenver.edu/cu-denver/graduate/programs-a-z/)

About the Catalog and Archive Information

The 2023-2024 CU Denver catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2023, Spring 2024, and Summer 2024 semesters. Although this catalog was prepared using the best information available at the time, all information is subject to change without notice or obligation. The university claims no responsibility for errors that may have occurred during the production of this catalog.

The courses listed in this catalog are intended as a general indication of the University of Colorado Denver curricula on the Denver campus. Courses and programs are subject to modification at any time. Not all courses are offered every semester, and faculty teaching particular courses or programs may vary from time to time. The content of a course or program may be altered to meet particular class needs.

The catalog is published only online in an accessible format. In accordance with requirements under the Americans with Disability Act (ADA), alternate formats are available upon request.

The CU Denver catalog is produced by the Office of the Registrar (https://www.ucdenver.edu/registrar/) at the University of Colorado Denver (https://www.ucdenver.edu/). Previous archived editions of this catalog are available online through this website (http://catalog.ucdenver.edu/archive/) or for older versions the Office of the Registrar website (https://www.ucdenver.edu/registrar/catalogs/archived/).

The University of Colorado Denver is an affirmative action/equal opportunity employer and educator committed to excellence through inclusiveness.

About CU Denver

University of Colorado Denver

We are Denver's partner in progress and ally in innovation. Our connection to our vibrant city inspires leading research, creative work, and civic engagement. Our collaboration with Denver's businesses and local government helps set us apart from other universities.

With a history that began in 1912, CU Denver has operated independently since 1973. Our location in downtown Denver serves more than 15,000 students. In Colorado and around the world, our talented graduates form a diverse and growing Lynx family.

We work to create welcoming and respectful learning environments where a culture of inclusion can flourish. At CU Denver, we honor our diversity of experiences and perspectives in the committed belief that they enrich the educational experience for all.

Other reasons why students choose the University of Colorado Denver:

Small class sizes: average undergraduate student-to-teacher ratio is 18:1.

Collaborative culture: Cross-disciplinary learning and research is a core value: programs blend technology with health care, business with public policy, and behavioral health with architecture.

Choices: With seven schools and colleges offering more than 110 degree programs, the University of Colorado Denver | Anschutz Medial Campus is a major university for the coming century.

About Our Students

The diversity of our student body is a source of deep pride. With students of color making up 43 percent of the student body, CU Denver is the most diverse research university in Colorado. Classes are filled with traditional students who enrolled after high school as well as transfer students and those who delayed college entry. Many professionals enroll mid-career to retool and strengthen their skills. The average age of an undergraduate student is 23 years while the average graduate student is 32 years old.

Bringing a rich mix of backgrounds, students travel across the country and the world to attend CU Denver. Domestic students come from 52 states and US territories and international students from 135 countries. All take advantage of convenient courses at times that meet their schedules. An enviable student-to-faculty ratio of 18:1 and a high-tech advising platform means students receive focused attention from professors and a clear path to graduation.

University Quick Facts

CU Denver Quick Facts*

Enrollment

- 14,509 students
- 68% undergraduate, 32% graduate/professional
- 74% full-time students
- 83% from Colorado
- 17% nonresident students of which International students come from 135 different countries
- 43% male, 56% female

Student-to-Faculty Ratio

- 18:1

Diverse Population

- 50% of enrolled students are students of color
- 51% of all new enrolled students are students of color
- Average age of undergraduate students: 23
- Average age of graduate students: 32
- Students from 52 states and US territories and 135 countries

Average entering ACT score

- 23.2 Composite

Average entering SAT score

- 554 Math
- 559 Verbal

Average high school GPA

- 3.5

Schools and Colleges on the CU Denver Campus

College of Architecture and Planning (p. 188)
College of Arts & Media (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-arts-media-cam/)
Business School (p. 130)
School of Education & Human Development (p. 876)
College of Engineering, Design and Computing (p. 293)
College of Liberal Arts and Sciences (p. 373)
School of Public Affairs (p. 966)

Programs

More than 110 degrees and programs across seven schools and colleges

Degrees

- Bachelor's
- Master's
- Doctoral
- First professional

Most-enrolled Undergraduate Degree Programs

- Biology
- Psychology
- Computer Science
- Music
- Fine Arts

Most-enrolled Graduate Degree Programs

- Business Administration
- Information Systems
- Public Administration
- Leadership for Education Equity
- Computer Science

Research Funding

More than $400 million in sponsored research annually

Alumni

- 110,000+ alumni
- 67% live in Colorado

National Rankings

US News and World Report 2022

- #112 in Top Public Schools
- #59 Top Performer on Social Mobility

- #165 in Best Undergraduate Engineering programs
- #126 in Best Engineering Schools
- #28 in Graduate Healthcare Management programs
- #29 among Graduate Public Affairs programs
  - #10 in Environmental Policy and Management
  - #25 in Local Government Management
  - #16 in Nonprofit Management
  - #19 in Public Finance and Budgeting
  - #21 in Public Management and Leadership
- #106 in Best Graduate Education Schools

*Based on Fall 2022 enrollment

From the Chancellor

Welcome to Colorado's public urban research university, where a diverse student body through quality academics, ambitious research and creative work, and community engagement in the city we call home. We are CU in the city.

Your success is our #1 priority. At CU Denver, you will benefit from:

Academic choices: More than 100 high-quality, in-demand degree programs in seven schools and colleges, leading to bachelor's, master's and doctoral degrees; hands-on learning opportunities, including work in research labs, service learning, study abroad and work-study;

Powerful connections: To partnerships, projects, internships and career opportunities in downtown Denver; to the vibrant arts and culture scene at our front door; and to a network of influential alumni who are leaders in Denver's civic, nonprofit and business communities;

Outstanding location: Access to a vibrant, safe urban lifestyle; resources and support to develop innovative solutions to complex local and global issues; and opportunities to build your skills in the city ranked by Forbes as the #1 Best Place for Business and Careers.

CU Denver is a place of academic excellence, where you will gain the powerful combination of immersive classroom and project-based experiences that are in demand today. Here you will meet gifted faculty, experts in their field, dedicated to student success, academic excellence and the real-world applications of their research and creative work. You'll interact with fellow students who are diverse, goal-oriented and energetic. Whether you engage in undergraduate or graduate studies, the University of Colorado Denver degree earns global respect and you can be confident that you will have been well-prepared for the next stage of your work or academic life.

We're delighted you've chosen CU Denver!

Michelle A. Marks, PhD
Chancellor

CU Denver Strategic Priorities

CU Denver 2030 Strategic Plan

CU Denver's 2030 strategic plan is a profound repositioning of CU Denver to be a public urban research university that works for all: learners of all kinds and at all stages of life, industries and employers that need talent ready to hit the ground running, and communities requiring new solutions and discoveries.

Goals for 2030

Our plan is designed to not only reset the playing field, but to change the game, increase access to an excellent education, and tackle some of the grandest challenges facing our society, all in service of the idea that CU Denver should work for all.

1. CU Denver will be the first equity-serving institution in the nation
2. Become known as a university for life
3. Be internationally known for its research and creative work
4. Serve as the anchor institution for an open innovation district in downtown Denver
5. Be known as a people-centered "Best Place to Work"

To learn more about CU Denver's Strategic Planning initiatives, please visit our website (https://www.ucdenver.edu/about/leadership/strategic-planning/).

History Spanning More Than 50 Years

Located on the downtown Auraria Campus and stretching into Denver's central business district, the University of Colorado Denver educates 15,000 students in the heart of an emerging global city. Part of the University of Colorado system (https://www.cu.edu/about-cu-system/?_ga=2.198221871.1449492668.1588702111-627714767.1588702111&_gac=1.1815
yVndLuxSeNevi1VDZvGYzQLUYSBgrmd1ZNgMK4roCEaAhlyEALw_wcB), CU Denver was officially founded in 1973. Throughout our history we have supported students from all walks of life, and we are committed to being a university that works for all (http://ucdenver.edu/2030/).

Our Origins

CU Denver is located on the traditional territories and ancestral homelands of the Cheyenne, Arapaho, and Ute nations. We acknowledge the painful history of genocide and forced removal from this territory and pay our respects to the diverse Indigenous Peoples still connected to this land. We give thanks to all Tribal Nations and the ancestors of this place and have developed a formal Land Acknowledgement (https://news.ucdenver.edu/this-land-is-their-land-universities-and-indigenous-acknowledgment-statements/) as one way to honor this past.

Our recent history acknowledges the Auraria neighborhood— (https://news.ucdenver.edu/honoring-displaced-aurarians-and-their-families-now-and-into-the-future/)composed largely of Hispanic community members—that was dismantled in the 1970s to construct the Auraria Higher Education Campus (AHEC) of which CU Denver is a part. CU Denver is committed to honoring the displaced Aurarians in multiple ways, including through the expanded Displaced Auarian Scholarship Program and a commitment to revitalize historic Ninth Street Park (https://ucdenver.edu/about-cu-denver/cudenveronninth/).

Honoring Our Past

CU Denver continues to acknowledge its past and that of Colorado's — from its ancestral lands and Hispanic heritage to its modern-day operation as a premier minority-serving public research institution making education work for all.

CU Denver Timeline

Take a look at where we began, occupying one building in downtown Denver, and where we ended up—we now serve more than 15,000 students a year.

1800s - Early 1900s

Gold Sparks a New Neighborhood

The history of Auraria is one of the oldest of modern-day Denver. In the years leading up to the 1800s, this land was the home of the Cheyenne, Ute, and Arapaho. Auraria, or aurum, is Latin for "gold," which was found in the Cherry Creek in 1858, igniting a small gold rush that established the Auraria settlement. Houses, businesses, and places of worship were built in the Auraria neighborhood over the next 50 years, and the neighborhood evolved over time to become largely Hispanic.

The Tivoli Brewery, built in 1870 in the Auraria neighborhood, operated for nearly 100 years before closing in 1966. Restored and opened in 1994 as the Auraria Campus Student Union. Today the Tivoli Student Union houses offices, study areas, the campus bookstore, restaurants, and a revived brewery.

1912 - 1960s

CU Expands in Denver

CU Denver originated in 1912, when the University of Colorado's Department of Correspondence and Extension was established to meet the needs of Denver's growing population. Holding classes in buildings across Speer Boulevard from the Auraria neighborhood—including in the Frontier Hotel's bar—the institution became known as Denver's "UCLA" (the University of Colorado between Lawrence and Arapahoe Streets).

As course offerings expanded, the Denver Extension Center was renamed the University of Colorado Denver Center in 1965. It was an institution that at its root helped nontraditional, working students pursue degrees, build skills, or simply enrich their lives near where they lived and worked. Demand grew and by 1969, 23 fields of undergraduate study and 11 of graduate study were offered. A Colorado constitutional amendment established CU Denver as an independent institution in 1973.

1970s

A Neighborhood Displaced

During the early 1970s, the U.S. Department of Housing and Urban Development designated the Auraria neighborhood an urban renewal area and Denver voters approved a referendum and bond issue to build the Auraria Campus. In a unique arrangement, three institutions of higher education—CU Denver, Metropolitan State University Denver, and the Community College of Denver—would be housed on one campus.

By 1974, most of the buildings in the Auraria neighborhood were condemned and razed.

A well-established, close-knit, largely Hispanic community of more than 300 households was displaced in the name of urban development. Thirteen cottages and one grocery store were preserved. Today they make up the 9th Street historic park on campus, the oldest restored block of residences in the city.

The university began the Displaced Aurarian Scholarship program (https://www.ucdenver.edu/student-finances/scholarships/displaced-aurarian/#:~:text=The%20Displaced%20Aurarian%20Scholarship%20is,to%20descendants%20of%20these%20residents) in the 1990s to provide tuition and fees for former residents of the Auraria neighborhood and their children and grandchildren. The university expanded the program in 2021 as part of a long-term effort to honor and support the displaced Aurarians and acknowledge the long-term impacts the taking of their homes has had on them, their families, and their livelihoods.

1980s – Today

Auraria and CU Denver Today

The establishment of this unique, innovative, tri-institutional campus, while carrying a difficult history, has made it possible for hundreds of thousands of people to improve their own lives through an affordable, high-quality education. Today the Auraria Campus serves more than 40,000 students across all three institutions.

CU Denver has grown, as well. As the most diverse research university in Colorado, CU Denver today draws top students each year and offers over 110 undergraduate and graduate degree programs (https://www.ucdenver.edu/academics/) across eight schools and colleges, as well as more than 30 online degree programs and numerous certificate and non-degree programs. (https://online.cu.edu/)

Home to more than 40 research centers and institutes, the campus receives sponsored research awards annually to generate knowledge and create solutions to society's most complex problems. CU Denver fills a singular niche as a vital contributor to the civic, cultural, and economic success of the city, the state, and beyond.

In more recent years:

- Downtown Denver has flourished, and CU Denver's geographic footprint has expanded
- We opened the the Lola and Rob Salazar Student Wellness Center (https://news.ucdenver.edu/lola-rob-salazar-student-wellness-center-opens-july-11/)
- We introduced club and intramural sports
- We built our first freshmen dorm in City Heights and a companion Learning Commons (https://news.ucdenver.edu/new-city-heights-residence-hall-and-learning-commons-opens/) facility for teaching and learning
- We launched an ambitious 2030 Strategic Plan (https://news.ucdenver.edu/work-for-all-how-cu-denver-will-become-a-leading-public-urban-research-university-by-2030/) that aims to make education work for all
- We announced the planned revitalization of historic Ninth Street Park (https://www.denverpost.com/2022/03/31/auraria-campus-ninth-street-historic-district-renovations/) and the construction of a brand new engineering, design, and computing building (https://news.ucdenver.edu/new-engineering-design-and-computing-building-will-serve-as-anchor-for-innovation-district-outlined-in-2030-strategic-plan/), the anchor of our forthcoming innovation district

Accreditation

The University of Colorado Denver is institutionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

The commission can be contacted at:

Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604
800.621.7449
www.hlcommission.org (http://www.hlcommission.org/)

Many professional organizations have also granted accreditation to specific academic programs, colleges and schools at the Denver Campus, including:

College of Architecture and Planning (p. 188)

- National Architectural Accrediting Board (NAB)
- Landscape Architecture Accreditation Board (LAAB)
- Planning Accreditation Board (PAB)

Business School (p. 130)

- Association for the Advancement of Collegiate Schools of Business - International (AACSB International)
- AACSB
- Commission on Accreditation of Healthcare Management Education (CAHME)

School of Education & Human Development (p. 876)

- Colorado Department of Education and Colorado Department on Higher Education
- Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- National Association of School Psychologists
- American Psychological Association - Commission on Accreditation

College of Engineering, Design and Computing (p. 293)

- Accreditation Board for Engineering and Technology (ABET)
- ABET - Engineering Accreditation Commission (EAC)
- ABET - Computing Accreditation Commission (CAC)

College of Liberal Arts and Sciences (p. 373)

- American Chemical Society (ACS) approved degree
- American Psychological Association

School of Public Affairs (p. 966)

- National Association of Schools of Public Affairs and Administration (NASPAA)

For more information regarding specialized accreditations for degree programs, please visit this website (https://www.ucdenver.edu/offices/institutional-research-and-effectiveness/data-analysis/institutional-data/#ac-specialized-accreditations-for-degree-programs-6) or contact the school or college.

Our Programs

As Colorado's only public urban research university, CU Denver is devoted to the needs of the residents of the city and the region. A solid foundation of academic and general education is assured through a comprehensive core curriculum. Students may pursue graduate education through all of the campus' colleges and schools. Pre-professional training in the fields of education, architecture, law, journalism and health careers is also available. Complete listings of areas of study available on the Denver Campus are available in the Programs (p. 1289) section of the catalog.

The colleges and schools sections of this catalog provide information on bachelor's, master's and doctoral degree programs, policies on requirements for graduation, course requirements, course descriptions and other similar information.

- College of Architecture and Planning (p. 188)
- College of Arts & Media (p. 208)
- Business School (p. 130)
- School of Education & Human Development (p. 876)
- College of Engineering, Design and Computing (p. 293)
- College of Liberal Arts and Sciences (p. 373)
- School of Public Affairs (p. 966)

Continuing and Professional Education

The Division of Continuing and Professional Education offers certificate/certification courses, professional development programs, precollegiate outreach programs and personal enrichment courses across the state of Colorado. Courses are offered in a variety of formats, including traditional on-campus, off-campus, online, hybrid, weekend, evening, short and condensed courses and many others.

Registration and tuition vary by school or college. Contact the specific school or college to learn about current program and course offerings or send an inquiry to continuingeducation@ucdenver.edu.

Campus

Our Campus and Community

Located in downtown Denver, the University of Colorado Denver, Denver Campus is physically located on the 151-acre Auraria Campus, which is shared with two other institutions: Metropolitan State University of Denver and Community College of Denver. Because we share facilities, our students have access to the level of resources found at much larger public universities.

Three beautiful buildings are central to our student community: Student Commons, Student Wellness Center, and City Heights, our new first-year student housing building. Students get together at Student Commons to study and eat. It's also home to Lynx Central, a help desk for prospective and current students that provides resources, referrals, and solutions. The Student Wellness Center houses a state-of-the-art sports and recreation facility, a Wellness Suite that includes the CU Denver Food Pantry, study rooms, a game lounge, and a two-story climbing wall. And City Heights, houses our students in the center of campus life. On the east side of Speer Boulevard, you will find our three buildings located in the heart of downtown Denver: Lawrence Street Center, CU Denver Building, and the Business School. The three buildings are within walking distance of many restaurants, cafes, and shops, as well as the 16th Street Mall.

Our campus is convenient for students who live throughout the metro area's many diverse neighborhoods. Students who work downtown love that we are so close. And students who live north or south of the city along the Front Range Corridor also benefit from our centrally located campus.

Both our shared campus and our downtown location contribute to an inclusive community that fosters respect for diverse students and groups.

CityCenter Links Campus and Community

CityCenter provides university resources to civic, nonprofit, and business leaders. with a street-level retail-like location at the southwest corner of 14th & Lawrence Street, CityCenter provides a physical and virtual portal for the community to connect with faculty expertise, student ingenuity,

and other CU Denver resources. Staffed during regular business hours, CityCenter is open to community members who would like to access the university's knowledgeable faculty, innovative student population, and research capabilities.

About the Auraria Campus

The Auraria Campus is a dynamic and vibrant higher education community located in the heart of downtown Denver. The 150-acre campus is shared by three separate and distinct institutions of higher learning: Community College of Denver, Metropolitan State University of Denver, and University of Colorado Denver. This is the most efficiently utilized campus in the state. Classrooms on the Auraria Campus are used an average of 50+ hours per week. Classes are held from 8 a.m. to 10 p.m; for building hours, please visit the AHEC website (https://www.ahec.edu/campus-info/building-hours/).

The Auraria Campus offers numerous amenities to students, faculty and staff, from the largest bookstore in the Rocky Mountain region to a state-of-the-art fitness facility. Details of these amenities are outlined in this section.

In addition to its proximity to the thriving business and industry of downtown Denver, the Auraria Campus has a distinct historic flavor. The Tivoli Student Union is housed in a renovated brewery originally built in the 1860s. Historic Ninth Street Park, St. Cajetan's Church/Performing Arts Center, St. Elizabeth's Church, and the Emmanuel Art Gallery are also located on campus.

Auraria Higher Education Center

The Auraria Higher Education Center (AHEC) is a separate state entity whose role is to provide and manage shared services, facilities, and property to support these prominent institutions in achieving their goals. The collective student population is approximately 42,000, with an additional 5,000 faculty and staff.

AHEC provides common services for the campus including: classroom scheduling, facilities services and construction, campus police, telecommunications infrastructure, student union, media services, book store, early learning center, parking and transportation, mail services and facilities master planning. Visit the AHEC website (https://www.ahec.edu/) for additional information.

Auraria Campus Event Services

Location: 900 Auraria Parkway, Suite 325
Phone: 303-556-2755
Email: acesmaindesk@ahec.edu
Website: www.ahec.edu/eventservices (http://www.ahec.edu/eventservices/)

Auraria Campus Event Services (ACES) manages all non-academic events that take place on the Auraria Campus. From a simple meeting to an impactful campus event like Spring Fling or Fall Fest, our team is committed to providing quality service and producing successful events.

A majority of the event spaces on campus are located in the Tivoli Student Union, but other event venues are also available in St. Cajetan's Event Center, the PE/Event Center, and several outdoor event spaces including the Tivoli Quad. Student groups can contact us for assistance with locating and booking a space and coordinating support services.

Services available include:

- event facility scheduling
- event coordination and planning
- audiovisual rental, set-up, and support
- management of student filming on campus
- coordination of event advertising on campus
- organization of information and fundraising tables

Auraria Early Learning Center (Child Care Center)

Location: 950 9th Street Park
Phone Number: 303-556-3188
Email: Please refer to website for more information
Website: https://www.ahec.edu/early-learning-center (https://www.ahec.edu/services-departments/early-learning-center/)

The Auraria Early Learning Center (AELC), a 5-star Colorado Shines-rated center, provides full-time programs for children 12-months to 5-years-old and summer camp for children through age 8. The center serves the students, faculty, and staff of the Auraria Campus. On a space-available basis, the center also serves the Denver community. All of the center's programs are fully licensed by the Colorado Department of Human Services.

Auraria Event Center/Student Recreation Center

Location: PE Building/Event Center, 1255 10th St Plaza, Denver, CO 80204
Phone: 303-615-1500
Email: campusrec@msudenver.edu
Website: https://www.msudenver.edu/recreation/

The Auraria PE/Event Center is a 2,800-seat facility for team and individual sport activities, academic programs, events and conferences. Our purpose is to foster individual and community well-being through the power of engagement, leadership, partnership and recreation. We provide a wide range of affordable, high quality, and inclusive recreational and wellness opportunities designed to support personal, academic, community and institutional success of Auraria Campus students, faculty, staff, alumni and the community at-large. Our building consists of Fitness and Wellness, Outdoor Adventure and Leadership, Recreational Sports, Educations/Certification, Member Services, Employment Opportunities, Partnerships, and Community Outreach.

Auraria Library

Location: 1100 Lawrence Street Denver, CO
Phone Number: 303-315-7763
Email: Please refer to website for more information
Website: https://library.auraria.edu/

The Auraria Library connects users with ideas through technology-enabled information discovery and delivery on an "anytime, anyplace" basis. The Library's collections of learning materials, resources, and research services support the information, research, and curriculum needs of the Auraria Campus. We strive to create a welcoming environment that fosters equity, diversity, and inclusion and nurtures creativity and learning. We are deeply committed to ensuring equitable access to knowledge and information from diverse perspectives for everyone as we build a shared vision that challenges existing notions of

the library and sparks discovery and curiosity about the world around us. Assistance from Library staff is available via one-on-one meetings, by phone, text, or chat on our website (https://library.auraria.edu/).

Auraria Media Center and Classroom Support

Location: 1100 Lawrence Street (East side of the Auraria Library), 015
Phone Number: 303-556-2426 **Classroom Equipment Service:** 303-556-3342
Email: jennifer.kerber@ahec.edu
Website: http://mediacenter.ahec.edu (https://www.ahec.edu/services-departments/classroom-support/media-center/)

The Auraria Media Center and Classroom Support Services offers a full range of media services and classroom support.

The Auraria Media Center provides a full range of media services for the Auraria Campus, as well as the Denver community.

Classroom Audiovisual Equipment Checkout

Instructors may reserve audiovisual equipment for course-related needs through the Media Center. Please contact MediaCenterEquipment@AHEC.edu (mediacenterequipment@ahec.edu) to make arrangements.

Non-Classroom Audiovisual Equipment Rental

Audiovisual equipment is available for rent for non-academic purposes. Please contact Troy Lucero (troy.lucero@ahec.edu) for rates and details.

Emmanuel Gallery

Location: 10th and Lawrence Street Pedestrian Mall
Phone Number: 303-315-7431
Email: jeff.lambson@ucdenver.edu
Website: http://www.emmanuelgallery.org/

Tri-institutional campus on Auraria Campus for over 35 years. Historical landmark who received the Mayor's Art for Excellence in 2012 featuring national, international artists, designers and architects as well as featuring student and faculty shows for each school on campus. Emmanuel Gallery's exhibitions are always free and open to the public. Stop in for a relaxing break.

Health Center at Auraria

Location: Plaza Building 150
Phone Number: 303-615-9999 **24 Hour Mental Health Crisis Line:** 303-615-9911
Email: Please refer to website for more information
Website: www.healthcenter1.com (https://www.msudenver.edu/healthcenter/)

The Health Center at Auraria is a tri-institutional department that provides Medical Services (https://healthcenter1.com/medical-services/) and Mental Health Services (https://healthcenter1.com/mental-health-services/) for all students, faculty and staff on the Auraria Campus. We are committed to caring for each member of this diverse community with sensitivity and respect. The Health Center at Auraria is an in-network medical provider for most Colorado offered Health Insurance (https://healthcenter1.com/health-insurance/), is easily accessible and provides high-quality care and Outreach Programs (https://healthcenter1.com/outreach-programs/).

All AHEC, CCD, MSU Denver and CU Denver students, faculty and staff on campus have full access to our services. Visit the Health Center's Eligibility, Fees & Service Charges (https://healthcenter1.com/eligibility-fees-and-service-charges/) for more detailed information about access to care.

King Academic and Performing Arts Center

Location: 855 Lawrence Way
Phone Number: 303-556-2296
Email: Please refer to website for more information
Website: www.ahec.edu/kingcenter (http://www.ahec.edu/kingcenter/)

The King Center houses six performing spaces: three permanently assigned production studios, a 197-seat recital hall; 520-seat concert hall; and the 270 seat Eugenia Rawls Courtyard Theatre. There are dressing rooms, green room, recording studio, lighting lab, music electronics lab, classroom space, box office, scene shop, paint shop and costume shop. All spaces are fully equipped with state-of-the-art equipment and a variety of spaces for exhibiting fine art. The entire facility has more than 180,000 square feet dedicated to the education of the student and development of the student who wishes to study performance/arts. The center can support many forms of entertainment, anywhere from legit theatre to large choral ensembles and other forms of performances.

Tivoli Student Union

Location: 900 Auraria Parkway #325
Phone Number: 303-556-6330
Email: an (angela.levalley@ahec.edu)gela.levalley@ahec.edu (Angela.LeValley@ahec.edu)
Website: www.ahec.edu/services-departments/tivoli (https://www.ahec.edu/services-departments/tivoli/)

A landmark of the Auraria Campus and the epicenter for campus life and services, the Tivoli Student Union supports the University of Colorado Denver, Metropolitan State University of Denver, the Community College of Denver, and the greater Denver community. The Tivoli was named #9 of the 25 best student unions by Best College Reviews (http://www.bestcollegereviews.org/features/most-amazing-campus-student-unions/).

Tivoli Student Union Directory and Map (https://www.ahec.edu/files/general/Tivoli_Directory_Map_8.5x11_.pdf)
The following services are located in the Tivoli Student Union:

- Barnes & Noble College Tivoli Station Bookstore
- i-lov-iT Market convenience store (located inside Barnes and Noble College Tivoli Station Bookstore)
- Tivoli Starbucks
- Food court
- Campus ID Station
- Campus Info Desk
- Conference and meeting spaces
- Facilities for recreational, social, and organized co-curricular student activities
- Credit Union of Denver
- Study lounges and spaces

ID Station

Location: 900 Auraria Parkway, Suite 269
Phone Number: 303-556-8352
Email: ids (idstation@ahec.edu)tation@ahec.edu (IDStation@AHEC.edu)
Website: www.ahec.edu/services-departments/id-station (https://www.ahec.edu/services-departments/id-station/)

The ID Station provides campus IDs for students, faculty, and staff, as well as the RTD Mobile CollegePass for students who participate in the RTD Mobile CollegePass program. The ID Station also serves as the hub for campus questions/information and the location for lost and found inquiries.

Barnes & Noble College Tivoli Station (Campus Bookstore)

Location: Tivoli Student Union, suite 205
Phone number: 303-556-4286
Email: tivolistation@ahec.edu
Facebook: facebook.com/TivoliStation (http://www.facebook.com/TivoliStation/)
Website: https://ucdenver.bncollege.com/

We've got you covered at Barnes & Noble College Tivoli Station, your best resource for **technology, CU Denver spirit gear, and cost-saving options for textbooks.** We offer both convenience and value. Look to us for easy one-stop shopping and a variety of programs designed to benefit students.

Downloadable PDF: General-Campus-Map (http://catalog.ucdenver.edu/cu-denver/about-cu-denver/campus/General-Campus-Map_as_of_Dec_2021.pdf)

For an interactive version of the CU Denver campus map, please visit the Campus Map website (https://www.ucdenver.edu/maps/cu-denver-map/).

For additional Auraria Campus maps (including but not limited to parking, campus accessibility, landing zones and lounges), please the Maps website (https://www.ahec.edu/campus-info/maps/).

Parking & Transportation Services

Location: 777 Lawrence Way, 1st Floor
Phone: 303-556-2003
Email: ahec_parking@ahec.edu
Website: https://www.ahec.edu/services-departments/parking (https://www.ahec.edu/services-departments/parking/)

A degree should help you get somewhere, and how you get to campus to earn that degree is an important thing to consider. CU Denver students have several options for traveling to and from campus safely and efficiently. CU Denver is conveniently located downtown near multiple light rail stations and bus stops. Bicycle commuting is also a popular option, given Denver's sunny weather, active culture, and miles of protected bike lanes. If you prefer to drive, there are parking spots available, too.

Parking Garages and Lots

Click here (http://catalog.ucdenver.edu/cu-denver/about-cu-denver/campus/Parking-Map_as_of_dec_2021.pdf) to download a copy of the parking map.

Tivoli Garage

Located at 9th Street and Auraria Parkway

- **Payment required 24/7, 365 days a year, immediately upon parking.**
- Auraria Campus Community members must register their vehicle (https://www.ahec.edu/services-departments/parking/register-your-vehicle/) to ensure they pay the campus community rates no matter when they park.
- Pay at a pay machine or pay-by-cell using the ParkMobile App (http://parkmobile.io/).
- Parking payment is enforced and violators are subject to citation. *Citations will be mailed instead of placed on the windshield.*

7th Street Garage

- **Payment required 24/7, 365 days a year, immediately upon parking.**
- Auraria Campus Community members must register their vehicle (https://www.ahec.edu/services-departments/parking/register-your-vehicle/) to ensure they pay the campus community rates no matter when they park.
- Parking payment is enforced and violators are subject to citation.
- Parking is available for 7th Street Garage Permit holders and Gold Passport holders.
- You can pay for parking with the free ParkMobile App (http://parkmobile.io/), or you can call (877) 727-5457 and enter Zone #3047.
- After you have parked your vehicle you may remit your payment at the Pay Station labeled PAY HERE located in the parking garage exit lane.

5th Street Garage

Located at 5th Street and Walnut Street

- **Payment required 24/7, 365 days a year, immediately upon parking.**
- Auraria Campus Community members must register their vehicle (https://www.ahec.edu/services-departments/parking/register-your-vehicle/) to ensure they pay the campus community rates no matter when they park.
- You can pay for parking with the free ParkMobile App (http://parkmobile.io/).

Vehicles that remain in garages after closing may be retrieved by contacting the Auraria Campus Police Department at 303-556-5000.

Daily Fee Lots

- **Payment required 24/7, 365 days a year, immediately upon parking.**
- All surface lots on campus are unattended and require payment by license plate number at a pay station or by cell phone.
- You may keep the payment receipt for your records, but it doesn't need to be displayed on your dash.
- Auraria Campus Community members must register their vehicle (https://www.ahec.edu/services-departments/parking/register-your-vehicle/) to ensure they pay the campus community rates no matter when they park.

Metered Parking

- **Payment required 24/7, 365 days a year, immediately upon parking.**
- Parking meters on the Auraria Campus are intended for short-term parking.
- Parking meters accept credit cards and coins.
- Parking permits and passports issued by Auraria Campus are not acceptable forms of parking meter payment.

- State-issued blue disability placards and disability license plates are not exempt from payment at Auraria Campus parking meters.

Motorcycle Parking

- Motorcycle-designated spaces are available in the 5th Street Garage and Tivoli Parking Garage.

Overnight Parking

- Overnight parking is prohibited without prior approval from the Parking & Transportation Services Office. Please call 303-556-2003 for more information.
- If a vehicle is left overnight due to an emergency, please call Parking Services Dispatch at 303-556-2000.
- Vehicles that remain in garages after closing may be retrieved by contacting the Auraria Campus Police Department at 303-556-5000.

University of Colorado Reciprocal Parking

Faculty, staff, and students with a valid full-time parking permit issued by CU Denver and UCCS may use their permit to park at designated parking lots on Auraria Campus without paying the daily fee. Campus visitors with ID badges for Anshutz Medical Campus may obtain a reciprocal parking permit at the Parking and Transporation Services office. Reciprocal parking is valid for travel related to official university business only, and parking spots are subject to daily space availability.

Auraria Campus Reciprocal Parking Lots

- 5th Street Garage
- Elm Lot
- Walnut Lot

Visit CU Denver Facilities Management for more information on the CU Reciprocal Parking Agreement (http://www.ucdenver.edu/about/departments/FacilitiesManagement/ParkingMaps/Parking/Pages/ReciprocalParking.aspx).

Accessible Parking

Accessible parking is available in nearly all lots on the Auraria Campus. Parking spaces are marked and reserved for vehicles that have a state-issued or campus-issued hangtag. See requirements below:

- **Permit lots and spaces:** an AHEC-issued permit is required
- **Daily-fee lots and garages:** a state-issued hangtag for persons with disabilities is required

All accessible parking on campus follows the standard Auraria Campus fee schedule. Daily-fee lots require payment at the time of parking.

Click here (https://www.ahec.edu/files/general/Accessible-Parking-Guide.pdf) to view the Accessible Parking Guide

Parking Permits

A number of lots are reserved for permit holders who purchase a prepaid permit each semester. Prepaid permits allow in-and-out privileges. Most permits can be customized to accommodate specific days of the week.

How to Purchase a Permit

- Purchase a Permit online » (https://ahec.t2hosted.com/Account/Portal/)
- Visit the Parking & Transportation Services Office (777 Lawrence Way in the 7th Street Garage). **In accordance with CDPHE Guidelines:** We are practicing safe social distancing, and only 5 people are allowed in the office at a time. The parking Staff is wearing masks, and you must wear a mask when you enter the office to purchase your permit.
- **Please bring the following:**
  - Current campus ID (or semester schedule)
  - Current vehicle registration
  - Payment in the form of a check, cash, or charge card (Visa, MasterCard, Discover, American Express)
  - For **accessible parking**, a valid disability parking registration, a valid disability parking placard or a valid disability license plate is required

Parking Rules and Regulations

The Auraria Campus Parking & Transportation Services is a self-supporting auxiliary enterprise, receiving no state appropriations.

Parking fees are established by the Auraria Board of Directors to provide sufficient annual revenue to support the cost of operation, maintenance, and development of the Auraria Campus Parking & Transportation Services.

State law prohibits the use of public funds or student bond fees for the construction or operation of the AHEC parking system. Therefore, construction improvement, maintenance, and operation of all parking facilities at Auraria Campus are financed solely through user fees.

Click here (https://www.ahec.edu/files/general/Policy-Parking-Rules-Regs.pdf)to view Parking Rules & Regulations

Public Transit (RTD) and Alternative Transportation

RTD CollegePass

The CU Denver RTD CollegePass provides students access to buses, light rail, Call-n-Ride, and Skyride. RTD CollegePass helps get you to and from campus and across the city. The cost for the pass is included in student fees.

Click here (https://www.ahec.edu/services-departments/parking/rtd-alternative-transportation/) for more information.

Bicycling

Denver and the surrounding suburbs are bicycle-friendly. Explore the Denver Bike Map (https://www.denvergov.org/content/denvergov/en/transportation-infrastructure/programs-services/bicycles/bike-maps.html). Combining bikes with transit makes it even easier to get around! RTD's bus and rail system serves commuters, avid cyclists, and city cruisers alike. You can take advantage of RTD bike and ride (https://www.rtd-denver.com/rider-info/bike-n-ride/) by bringing your bike on the light rail or buses.

Bicycle Registration

Everyone is encouraged to register their bike with the Auraria Campus Police Department.

Bicycle Registration (https://www.ahec.edu/services-departments/police/bicycle-registration/)

Administration

CU Denver Leadership

Michelle A. Marks, PhD

Chancellor, University of Colorado Denver
BS, James Madison University
MA, George Mason University
PhD, George Mason University

Vice Chancellors and Cabinet Members

Constancio Nakuma, PhD
Provost and Executive Vice Chancellor for Academic and Student Affairs
Bachelor's from University of Ghana-Legon (Ghana)
Master's from Université Paris X-Nanterre (France)
PhD, Sorbonne Nouvelle

Ann Sherman
Executive Vice Chancellor of Finance and Administration
BA, University of Michigan, Dearborn
MS, Wayne State University

Melisa Baldwin
Vice Chancellor for Advancement
BA, University of West Florida
M.Ed., University of West Florida

Philip De Leon
BS, University of Texas, Austin
MS, University of Colorado, Boulder
PhD, University of Colorado, Boulder

Antonio Farias
Vice Chancellor for Diversity, Equity, and Inclusion
BA, University of California, Berkeley
MA, University of California, Berkeley
MFA, University of California, Riverside

Anthony E. Graves
Managing Director of Partnerships and Innovation
BA, DePauw University
MBA, University of Denver

Daniel Maxey
Chief of Staff
BA, The College of William and Mary
MA, Arizona State University
PhD, University of South California

Chris Puckett
Managing Associate University Counsel & special Assistant to the Chancellor for Government Relations
BA, University of Denver
JD, Georgetown Law

Doug Sicker
Vice Chancellor of Technology, Strategy, and Innovation & CTO

Monique Snowden
Senior Vice Chancellor for Strategic Enrollment and Student Access
BA, Texas A&M University
MS, Texas A&M University
PhD, Texas A&M University

Marie Williams
Vice Chancellor for University Communications
BA, University of Pennsylvania

CU Denver Deans

Nan Ellin
College of Architecture and Planning

Joann Brennan
College of Arts & Media (Interim Co-Dean)

Nathan Thompson
College of Arts & Media (Interim Co-Dean)

Scott Dawson
Business School

Martin Dunn
College of Engineering, Design and Computing

Pamela Jansma
College of Liberal Arts and Sciences

Paul Teske
School of Public Affairs

Marvin Lynn
School of Education & Human Development

To learn more about the Office of the Chancellor *(*p. 17*) and University Leadership, please visit their* website *(*https://www.ucdenver.edu/about/leadership/*).*

University of Colorado System

The University of Colorado is a system of four campuses located in Boulder, Colorado Springs, Denver and Aurora. With combined total enrollments of over 60,000 students, the University of Colorado system consistently ranks in the top 15 among public universities and colleges in overall research expenditures and seventh among public universities in federally funded research. Awards for research within the system total more than $920 million, with funding provided by federal agencies, appropriations from the state of Colorado and private foundations and donors.

University Leadership

President

Todd Saliman
President, CU System

Chancellors

Phillip P. DiStefano
Chancellor, CU Boulder

Venkat Reddy
Chancellor, UCCS

Michelle A. Marks
Chancellor, CU Denver

Donald M. Elliman Jr.
Chancellor, CU Anschutz Medical Campus

President's Executive Team

Danielle Radovich Piper
Senior Vice President for External Relations and Strategy

Annie Bacary
Associate Vice President and Advancement Administration Office

Dr. Judi A Diaz Bonacquisti
Senior Diversity Officer

Leonard Dinegar
Senior Vice President for Internal Operations and Chief of Staff

Jack Finlaw
President and Chief Executive Officer University of Colorado Foundation

Jeremy Hueth
Vice President, University Counsel, and Secretary to the Board of Regents

Michael Lightner
Vice President for Academic Affairs

Chad Marturano
Vice President and Chief Financial Officer

Ken McConnellogue
Acting Vice President for University Commincations

Felicity O'Herron
Chief Human Resources Officer and Associate Vice President of Employee Service

Heather Retzko
Senior Associate Vice President of State Relations

Tony Salazar
Vice President for Outreach and Engagement

Valerie Simons
Chief Compliance Officer & System Title IX Coordinator

To learn more about the Office of the President and University Leadership, please visit their website *(*https://president.cu.edu/*).*

CU Board of Regents

Lesley Smith, Chair
At Large
term expires 2025

Ken Montera, Vice Chair
District 5
Current term Nov. 2025

Nolbert D. Chavez
District 7
term expires 2027

Glen Gallegos
District 3
term expires 2025

Mark VanDriel
District 8
term expires 2029

Wanda James
District 1
term expires 2029

Callie Rennison
District 2
term expires 2027

Frank McNulty
District 4
term expires 2029

Ilana Dubin Spiegel
District 6
term expires 2027

To learn more about the Board of Regents, please visit their website *(*https://regents.cu.edu/*).*

Related Organizations

CU Denver Alumni

Mailing Address:
Lawrence Street Center
Office of Advancement | Alumni Engagement
1380 Lawrence Street Center, Suite 1201
Denver, CO 80204 (*mailing and physical*)

Telephone: 303-315-2333
E-mail: alumni@ucdenver.edu
Website: https://www.ucdenver.edu/offices/cu-denver-alumni (https://www.ucdenver.edu/offices/cu-denver-alumni/)

CU Denver Alumni is the formal name for our community of former students including over 110,000 graduates from any of the University's undergraduate, graduate, and certificate programs. While 67% of our graduates stay in Colorado, our global community stretches across 105 countries.

CU Denver Alumni seeks to engage graduates in the life of the university and with each other through advocacy, philanthropy, volunteering, and lifelong learning.

CU Denver Alumni is part of the Office of Advancement (https://www.ucdenver.edu/offices/office-of-advancement/home/) which connects those who are passionate about education and research to the people and programs at CU Denver who can excel with their support. The Office of Advancement works to ensure a bright and promising future for CU Denver through robust engagement, transformative philanthropy, and a deep sense of pride in the university.

Office of University Advancement

Mailing Address:
Lawrence Street Center
Office of Advancement | Alumni Engagement
1380 Lawrence Street Center, Suite 1201
Denver, CO 80204 (*mailing and physical*)

Telephone: 303-315-3601
Fax: 303-315-2063
Email: advancement@ucdenver.edu
Website: https://www.ucdenver.edu/offices/office-of-advancement (https://www.ucdenver.edu/offices/office-of-advancement/)

The Office of Advancement connects those who are passionate about education and research to the people and programs at CU Denver who can excel with their support. We serve as a trusted campus and

community resource that inspires alumni pride and private support to advance CU Denver's mission, and we work to ensure a bright and promising future for CU Denver through robust engagement, transformative philanthropy, and a deep sense of pride in the university. We are also grateful for the advocacy and support provided by the Chancellor's Development Committee, a group of alumni and friends who volunteer their time and expertise in support of CU Denver's educational mission.

Student Services and Other Student Resources

Lynx Life

Here you are: At an urban university with powerful programs and opportunities—for your education, your career, your life. On a high-energy, downtown campus right next to the Rocky Mountains. Part of a strong CU Denver Lynx community, where we lift one another up to meet our challenges. You are right where you belong. Below are some of programs you are able to utilize as a CU Denver student.

Center for Identity & Inclusion | Diversity, Equity & Inclusion

Location: Student Commons Building, Room 2007
Phone: 303-315-1880
Email: cii@ucdenver.edu
Website: http://www.ucdenver.edu/about/departments/odi/CII/Pages/default.aspx
Office Hours: 8:00 am - 5:00 pm

The Center for Identity & Inclusion (CII) provides services: a) to support underrepresented students and b) to promote a diverse and inclusive campus for all students, faculty, and staff.

CU Denver's Center for Identity & Inclusion (CII) consists of American Indian Student Services (AISS), Asian American Student Services (AASS), Black Student Services (BSS), and Latinx Student Services (LSS). CII provides vital links to the culturally rich and diverse community surrounding CU Denver.

American Indian Student Services

Location: Student Commons Building, Room 2007C
Phone: 303-315-1882
Email: grace.tyon@ucdenver.edu
Website: https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/american-indian-student-services (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/american-indian-student-services/)

American Indian Student Services (AISS) welcomes students of all American Indian and Alaska Native heritages! AISS serves both students who are tribally enrolled and those who identify but are not enrolled in their tribes.

AISS provides culturally responsive educational support:

- Resource Referral
- Scholarship Information
- Advocacy
- Cultural Events & Student Clubs

CU Denver American Indian and Alaska Native students represent more than 100 different tribes. The Denver Indian Community is strong! Many families in Denver live far from tribal homelands, yet retain tribal identities and cultures. Twenty percent speak Native languages. The Southern Ute and the Ute Mountain Ute Tribes, located in the Four Corners area are the two federally-recognized tribes in Colorado.

Asian American Student Services

Location: Student Commons Building, Room 2007E
Phone: 303-315-1879
Email: soyon.bueno@ucdenver.edu
Website: https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/asian-american-student-services (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/asian-american-student-services/)

Asian American Student Services within the Center for Identity & Inclusion offers a wide array of services and programs to support, engage, and educate all students.

Our mission:

- Support the retention, graduation, and success of Asian American Pacific Islander students
- Encourage students to become actively engaged in their learning experience
- Promote students' exploration of social identity, leadership, and professional development
- Provide opportunities for networking

Black Student Services

Location: Student Commons Building, Room 2007F
Phone: 303-315-1881
Email: omar.montgomery@ucdenver.edu
Website: https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/black-student-services/

Black Student Services Program offers a uniquely-designed network of support services to assist students in all phases of their educational career at CU Denver. Since its inception in 1969, Black Student Services has helped hundreds of students with admission into undergraduate and graduate programs, academic counseling, and peer support services. Because we believe that students should have a strong supportive environment during their education, we subscribe to the concept of Jamaa II: "a second family away from home."

Latinx Student Services

Location: Student Commons Building, Room 2007H
Phone: 303-315-1878
Email: abenicio.rael@ucdenver.edu
Website: https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/latinx-student-services (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/latinx-student-services/)

The mission of Latinx Student Services is to provide an inclusive environment to support the intersectional experiences, diverse cultures, and educational goals of Latinx students a CU Denver.

We seek to accomplish this by:

- Advocating for the needs of Latinx students
- Supporting students to amplify their voice and enact agency

- Providing programs, events, and workshops that raise awareness about social justice issues that impact the diverse Latinx cultures, identities, and intersectional experiences.
- Supporting the leadership development of Latinx student organizations.
- Building community and a sense of belonging for all Latinx students, faculty, and staff.

Undocumented Student Services

Location: Student Commons Building, Suite 2007
Phone: 303-315-1883
Email: uss@ucdenver.edu
Website: https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/undocumented-student-services (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/undocumented-student-services/)

The mission of the Undocumented Student Services Program is to serve DREAMer and mixed status students at all intersections of documentation and equity needs, to support DREAMers in achieving their degree, to create an equitable educational environment, and to advocate alongside students for continuous improvements in the DREAMer college experience. The University of Colorado Denver remains committed to providing access to all qualified students, including students under the Deferred Action for Childhood Arrivals (DACA (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/undocumented-student-services/terminology/)) and Advancing Students for a Stronger Economy Tomorrow (ASSET (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/undocumented-student-services/terminology/)) program. ASSET, DACA, Mixed Family Status (https://www.ucdenver.edu/offices/diversity-and-inclusion/our-offices/undocumented-student-services/terminology/), and undocumented students are valuable members of our student body whom we strive to ensure are safe and respected on our campus. We are pleased to provide a variety of services, support, and information for students, faculty, and staff to help undocumented students succeed at CU Denver and CU Anschutz.

Women & Gender Center

Location: Tivoli Student Union 310
Phone: 303-315-7262
Email: cii@ucdenver.edu
Website: www.ucdenver.edu/wgc (https://www.ucdenver.edu/wgc/)

The Women & Gender Center (WGC) at CU Denver is committed to advancing issues of gender equity and supporting the gender-focused needs of students, faculty, and staff on the Auraria campus. The mission of the Women and Gender Center is to address gender inequities and foster a campus community that values inclusion, social justice, equity, and respect for everyone regardless of background and experience.#We are committed to enacting intersectional feminism in our programming by#exploring gender as it#overlaps#and interacts with the multiple identities that people inhabit across their lifespans. We serve all members of the CU Denver community, regardless of gender identity.

Disability Resources and Services Office

Location: Student Commons Building, Room 2116
Phone: 303-315-3510
Email: disabilityresources@ucdenver.edu
Website: http://www.ucdenver.edu/disabilityresources (http://www.ucdenver.edu/disabilityresources/)

The Office of Disability Resources and Services (DRS) is committed to providing equal opportunities and fostering the personal growth and development of students with disabilities. The DRS staff strives to meet the needs of a large and diverse community of students with disabilities. We are available to provide assistance and to arrange for reasonable accommodations that will address specific educational needs. Accommodations may include, but are not limited to, the following:

- Priority registration for classes
- Assistance in identifying volunteer note takers
- Alternative testing for assessment tests and classroom examinations
- Oral/sign language interpreters
- Real-time captioning
- Textbooks in alternate formats (audio taped, Braille, enlarged, scanned)

ESL Academy

Location: 1100 Lawrence St #014
Phone: 303-315-2383
Email: esl@ucdenver.edu
Website: http://esl.ucdenver.edu

The University of Colorado Denver's English as a Second Language (ESL) Academy offers a rich diversity of academic, social, and cultural learning opportunities. The Academy offers high-quality, year-round ESL instruction specifically designed for university preparation. The curriculum helps students improve their language skills through a rigorous program of study, campus involvement, and cultural and educational activities.

Our program offers the following distinctive advantages when compared against other programs:

The curriculum is designed especially for university-bound students. In addition to mastering academic English, students will learn how to succeed academically at the University of Colorado Denver or any other university they choose to attend.

Students in the ESL Academy will be considered University of Colorado Denver students. They will be on the university campus from day one of our program and will be eligible to live in university housing, though there will be limited availability for students who join our program mid-term.

Students will have access to all of the activities and resources that the university has to offer, not to mention the spectacular outdoors and urban life in Denver and Colorado.

The ESL Academy also offers the LynxDirect Pathway for students. This 16-week program allows students to complete level 5, our highest level, in the first 8 weeks of the semester and then complete 6 credits towards an undergraduate degree in the second 8 weeks of the semester.

When a student completes the ESL Academy successfully, s/he will automatically fulfill the University of Colorado Denver's English language proficiency requirement and will be eligible for full admission.

Students will be issued a Form I-20 from the University of Colorado Denver for a seamless immigration experience and will not have

to transfer their immigration status to begin their degree program upon complete completion of the ESL Academy.

Students will benefit from a seamless transition to university degree programs after they successfully complete the ESL Academy, thus maximizing the prospects of their success.

For full details, visit the ESL Academy online at esl.ucdenver.edu. Here, students can get information about:

- The online application (https://clas.ucdenver.edu/esl/future-students/application-information/)
- Program information (https://clas.ucdenver.edu/esl/academics/curriculum-overview/)
- Tuition and Fees (https://clas.ucdenver.edu/esl/future-students/tuition-fees/)
- International Student Services (https://www.ucdenver.edu/services/international-student-and-scholar-services/)

If you have additional questions you may send an email to esl@ucdenver.edu or call 303-315-2383. Located at 1100 Lawrence Street #014 Denver, CO 80204

LGBTQ Student Resource Center at Auraria

Location: Tivoli Student Union 213
Phone: 303-615-0515
Email: lgbtq.auraria.staff@gmail.com
Website: https://www.msudenver.edu/lgbtq/

The LGBTQ Student Resource Center is a tri-institutional office on the Auraria Campus serving the students, faculty and staff of Metropolitan State University of Denver, Community College of Denver and University of Colorado at Denver. We are available to all Auraria students as a resource for exploring issues of sexual orientation and gender identity.

The LGBTQ Student Resource Center is located in the Tivoli Student Union, Room 213, and is staffed by a director and assistant director, with the support of student employees and volunteers. Input and involvement from the entire campus community are welcomed. Our center offers a variety of support, education, and advocacy services for the entire campus community including:

- Support for those who may have questions about their own sexual orientation, gender identity, gender expression, or that of a friend or family member
- Advocacy for students experiencing discrimination or harassment based on a real or perceived LGBTQ identity
- Speakers for events, workshops, and classes on various aspects of sexual orientation/gender identification
- Programs and workshops about working more effectively with the gay, lesbian, bisexual, and transgender communities and combating misinformation, misconceptions, and homophobia
- Resource library with over 1700 books and videos (documentary and cinema) available for research and leisure as well as a multitude of free literature regarding other organizations and services throughout Denver and Colorado that provide outreach, services, and advocacy.

LynxConnect

Location: 900 Auraria Parkway #439 (Tivoli Annex)
Phone: 303-315-4000
Email: LynxConnect@ucdenver.edu
Website: https://www.ucdenver.edu/lynxconnect (https://www.ucdenver.edu/lynxconnect/)

Need help connecting what you're studying to your future goals? LynxConnect is your one-stop-shop for enhancing your student experience, expanding your global perspective, researching your world, discovering internships, finding campus employment and exploring your career options.

Four Offices, One Location

Our brand new 15,000 square foot center is focused on providing you with experiences outside the classroom, making you more marketable as you prepare for your next chapter in life, career and job search. Make an appointment or drop in to meet with an expert who can tackle your questions and help you gain hands-on, real-world experience.

The Career Center

Location: Tivoli Student Union, LynxConnect, Suite 439
Phone: 303-315-4000
Email: CareerCenter@ucdenver.edu
Website: https://www1.ucdenver.edu/services/career-center (https://www1.ucdenver.edu/services/career-center/)

The Career Center offers a full array of services that prepare students for their transition from college to career. Students are encouraged to participate in career-related events and services as early as their freshman year. This includes obtaining help in choosing a major, deciding on career options, and mapping out experiences necessary to be successful upon graduation. The Career Center also supports students in refining job search skills like resume & cover letter writing, interview preparation, and targeting employers through our internship and job board called Handshake.

The Career Center's mission is to provide personal and meaningful interactions with students, alumni and employers in order to prepare them for the world of work.

Internships

Location: Tivoli Student Union, LynxConnect #439
Phone: 303-315-7258
Email: Experiential.LearningCenter@ucdenver.edu
Website: https://www.ucdenver.edu/lynxconnect/internships (https://www.ucdenver.edu/lynxconnect/internships/)

Experiential learning includes a variety of activities with one common goal-to immerse you in hands-on learning outside the classroom where your experience is at the heart of the learning process. The Experiential Learning Center (ELC) serves students, faculty, and employers as a resource for experiential learning opportunities. We offer information, resources and support in the development and coordination of academic and non-academic internship experiences, professional skill development opportunities, and undergraduate research experiences.

Undergraduate Research & Creative Activities

Location: Tivoli Student Union, LynxConnect, Suite 439
Phone: 303-315-4000

Email: LynxConnect@ucdenver.edu

Website: https://www.ucdenver.edu/lynxconnect/undergraduate-research (https://www.ucdenver.edu/lynxconnect/undergraduate-research/)

The Office of Undergraduate Research & Creative Activities (URCA) is your connection to the research opportunities that are out there just waiting for you. We're here to help you get the information you need to jump-start your research career.

This is your chance to connect your classroom learning to real-world research opportunities through grants, work-study, summer fellowships, and more.

It's education through undergraduate research and creative activities and we call it EURēCA! Once you've discovered the possibilities, you'll see why.

The EURēCA! Program

The Education Through Undergraduate Research and Creative Activities (EURēCA!) Program is your connection to the support you need to succeed in research activities at CU Denver | Anschutz. We help with grants, student research jobs, and fellowships, and feature student projects at our annual symposium.

The Office of Global Education | Study Abroad

Location: Tivoli Student Union, LynxConnect Suite 439
Phone: 303-315-2001
Email: study.abroad@ucdenver.edu
Website: https://www.ucdenver.edu/students/study-abroad (https://www.ucdenver.edu/students/study-abroad/)

The Office of Global Education / Study Abroad provides academically and professionally relevant international experiences to a diverse student population at the University of Colorado Denver | Anschutz Medical Campus. These experiences equip students with cross-cultural skills necessary to succeed in an interconnected global society. The Office of Global Education is committed to providing students with a wide range of engaging and affordable study, internship, research, and clinical opportunities.

International program offerings vary to meet the needs and interests of all students. These programs are open to undergraduate, graduate, and international students; it is not necessary to be a particular major to participate. Program lengths range from two weeks to an academic year or more. The vast majority of programs do not require language proficiency beyond the English language.

The Office of Global Education strives to keep study abroad programs affordable. In most cases, students are able to utilize financial aid and are eligible for an array of internal and external scholarships. For the most current information on programs, policies, and funding, please visit the Office of Global Education website at https://www.ucdenver.edu/students/study-abroad (https://www.ucdenver.edu/students/study-abroad/) or visit LynxConnect in the Tivoli.

Office of International Affairs

Location: Lawrence Street Center, Suite 932
Phone: 303-315-2230
Email: Please refer to website for more information
Website: https://www.ucdenver.edu/offices/international-affairs (https://www.ucdenver.edu/offices/international-affairs/)

The Office of International Affairs (OIA) serves the university by providing administrative support, strategic advice, technical services, collaborative educational programs with the university's 13 schools and colleges, and related services that contribute to the strategic international goals of the university. OIA provides visa and orientation services to international students and scholars; offers expertise in the development and maintenance of undergraduate, graduate and professional global education; assists with brokering and designing bilateral international educational programs; and offers comprehensive international recruitment and admissions services. OIA addresses international policy issues, has oversight of international risk management protocols, serves as a resource for best practices in the internationalization of higher education, maintains central data bases pertaining to international activities of the university, advises on the development of international affiliations and agreements, assists departments/programs and schools/colleges with the development of comprehensive international strategic planning, and seeks to promote and support initiatives that advance international research, education, and global cooperation in order to enhance the reputation of the University of Colorado Denver | Anschutz Medical Campus.

OIA also serves as a resource for faculty seeking international research opportunities, provides a comprehensive list of international scholarship/fellowship information, and serves as the institutional liaison for the CIES Fulbright Scholars Program.

The divisions of OIA include:

- International Operations (https://www.ucdenver.edu/offices/international-affairs/about/staff/international-operations (https://www.ucdenver.edu/offices/international-affairs/about/staff/international-operations/))
- Global Education: Study Abroad (https://www.ucdenver.edu/students/study-abroad (https://www.ucdenver.edu/students/study-abroad/))
- International Admissions (www.internationaladmissions.ucdenver.edu (http://www.internationaladmissions.ucdenver.edu))
  - For more information, visit the Undergraduate (p. 43) and Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/international-admissions/) catalogs.

International Student and Scholar Services

Location: Student Commons Building, Suite #1119
Phone: 303-315-2230
Email: isss@ucdenver.edu
Website: https://www.ucdenver.edu/services/international-student-and-scholar-services (https://www.ucdenver.edu/services/international-student-and-scholar-services/)

The International Student & Scholar Services (ISSS) unit in the Office of International Affairs serves approximately 1,400 international students and 500 international scholars from all over the world each year. ISSS is responsible for ensuring university-wide compliance with a wide range of federal regulations relating to the enrollment and/or employment of international students and scholars. Sponsored Student Services, a sub-unit within ISSS, also provides advising to students sponsored by an international third-party organization.

ISSS collaborates with international students, faculty, researchers, and staff to contribute to the diverse teaching, research, and learning community at The University of Colorado Denver | Anschutz Medical Campus. We provide expert holistic immigration advising; partner with stakeholders to advocate for our students and scholars; and foster intercultural exchange on our campuses. We support our students and scholars as they navigate life in the U.S. and endeavor to reach their goals.

ISSS staff members serve students based on a portfolio model; to find out more about the academic portfolios and to learn about your assigned International Services Specialist, please click here (https://www.ucdenver.edu/services/international-student-and-scholar-services/appointments/). To schedule an appointment with a staff member, please click here (https://www.ucdenver.edu/services/international-student-and-scholar-services/appointments/). For additional information about ISSS and the services we provide, visit our website (https://www.ucdenver.edu/services/international-student-and-scholar-services/).

International College Beijing

International College Beijing- https://www.ucdenver.edu/offices/international-affairs/partners/international-college-beijing (https://www.ucdenver.edu/offices/international-affairs/partners/international-college-beijing/)

International College Beijing (ICB) is a joint education program between the University of Colorado Denver (CU Denver) and China Agricultural University (CAU), located in Beijing, People's Republic of China. The partnership, formed in 1994, was one of the first of its kind approved by the Chinese Ministry of Education. ICB is accredited by the North Central Association of Colleges and Schools in the U.S. and maintains a reputation as a challenging, robust academic program.

At ICB, students earn a bachelor of arts degree from CU Denver with a major in either economics or communication. Courses are taught in English by CU Denver faculty on the China Agricultural University campus in Beijing. The curriculum is academically rigorous and equal to that of the economics or communication major on the downtown Denver campus. Beijing students have an opportunity to study on the downtown Denver campus and U.S. students may chose to study in Beijing as well, fostering a truly global classroom experience.

In Beijing, ICB is located on the east campus of China Agricultural University in the Haidian district north of downtown Beijing, the capital of the People's Republic of China. The campus is a thirty-minute ride from downtown Beijing, Beijing International Airport and major cultural centers such as Tiananmen Square, the Forbidden City, and the Summer Palace.

The Office of Student Life and Campus Community

Location: Tivoli Student Union 303
Phone: 303-315-7288
Email: studentlife@ucdenver.edu
Website: https://www.ucdenver.edu/student-life (https://www.ucdenver.edu/student-life/)

The Office of Student Life integrates the academic, residential, and co-curricular spheres of student's lives, linking the out-of-class experience to the academic mission of the University while enhancing the overall educational experience of students through the development of, exposure to and participation in social, cultural, intellectual, recreational, leadership and governance programs. Student Life and Campus Community is the advising, coordinating, resource and general information center for student organizations, the academic honor societies student government and the student newspaper. We collaborate with students, faculty, administrators, and other partners both inside and outside of the CU Denver community to create safe environments for students. In addition, we create opportunities for students to learn through active participation and reflection where they can develop as responsible leaders and engage with their peers and cultivate appreciation for diversity and the betterment of our global society. Student Life and Campus Community is comprised of Student Organizations and Student Leadership Programs, Volunteer and Community Engagement, and Parent and Family Program.

Student Newspaper: CU Denver Sentry

Location: Tivoli Student Union, 345
Phone: 303-556-2535
Email: Please refer to website for more information
Website: www.cu-sentry.com (http://www.cu-sentry.com)

Since 1964, *The Sentry* has served as CU Denver's premier source of campus and community news for students and members of the university community. This paper has published every Wednesday and continues to do so in this new century providing the latest in campus news and events in the Denver community. Once known as *The Advocate*, as of 2016 The Sentry has once again revived the original name in efforts of getting back at our original history. *The Sentry* boasts a succinct team of more than 15 contributing members working under 4 editorial sections that help contribute to making the paper come to life each week. Student's serve at *The Sentry*'s editors, writers, photographers, and visual designers. An editorial team composed of CU Denver students serves as the official representatives in expressing the CU Denver student body views and ideas. CU Denver may my not have a journalism program, but *The Sentry* serves as the opportunity to expose students to the world of journalism. Learning practical skills in writing, editing, and publishing. *The Sentry* serves as a resource to the students, faculty, and staff and community members of Denver and the Auraria Campus. The print paper offers coverage of not only on-campus events and topics but as well as encouraging the community to find something to call their own in the city of Denver.

Student Organizations

Location: Tivoli Student Union 303
Phone: 303-315-7288
Email: studentlife@ucdenver.edu
Website: https://www.ucdenver.edu/student-life/student-organizations (https://www.ucdenver.edu/student-life/student-organizations/)

Get involved with a student organization, student government or the campus newspaper. CU Denver houses over 100+ student organizations whose focus range from academics to culture, faith/spirituality, community service, professional development, and everything in between! We help students register with student organizations, and provide services, information, education, support, and advising to assist with the development and strengthening of students and student groups. In addition, we provide multiple opportunities for students to engage in practicing and developing their leadership skills. Leadership programs include diverse leadership conferences including CO-Leads, a state wide multi-cultural leadership conference; and the Lynx Leadership Conference, a program designed to increase the leadership skills of CU Denver Students. We also provide leadership trainings that enhance the co-curricular experience on campus through programs such as Leadership On demand, a program designed for students involved in student organizations on campus; and Student Government Association, providing a voice for students on campus. We encourage students to take advantage of shared governance and increase the sense of community on campus through all of the leadership programs.

Student Leadership Programs

Location: Tivoli Student Union 303
Phone: 303-315-7288
Email: studentlife@ucdenver.edu

Website: https://www.ucdenver.edu/student-life/leadership-programs (https://www.ucdenver.edu/student-life/leadership-programs/)

CU Denver provides leadership education programs and workshops through the Office of Student Life and Campus Community, and Peer Advocate Leaders (PAL). Leadership education programs are designed to provide students with tools and skills to become confident leaders. Participation in leadership programs may also help students connect with each other, giving them an increased sense of belonging here at CU Denver.

- Learn to be a socially responsible leader
- Develop your career readiness competencies in the areas of critical thinking/problem-solving, teamwork/collaboration, leadership, and professionalism/work ethic
- Experience the rewards of peer mentorship

Our Summit Leadership Program is open to all CU Denver students. To join the program, log into our CU Denver student engagement platform MyLynx. Members of the Summit Leadership Program receive information on leadership events, registration deadlines, and are invited to special events just for Summit members.

Student Life & Campus Community also coordinates programs and services to enhance student development and encourage students to lead an active campus life by providing opportunities for co-curricular involvement. Beyond leadership workshops & programs, our staff team supports leadership development through our work with student organizations, community service, campus speakers, leadership conferences, and a variety of campus programs.

Community Engagement

Location: Tivoli Student Union 303
Phone: 303-315-7288
Email: studentlife@ucdenver.edu
Website: https://www.ucdenver.edu/student-life/community-engagement (https://www.ucdenver.edu/student-life/community-engagement/)

At the University of Colorado Denver, we are proud to not just be located in an urban setting, but to be transformative partners within our communities. CU Denver Community Engagement strives to be a connection point for students to engage with civic leaders, nonprofit agencies, and opportunities for community service. Whether you are a student looking for a one time volunteer role, to build a relationship with a community agency, or learn more about an upcoming election, our office will be there to help you navigate your options!

TRIO Student Support Services & McNair Scholars

Location: Student Commons Building Ste 2011
Phone: 303-315-3550
Email: Please refer to website for more information
Website: https://www.ucdenver.edu/trio/

CU Denver TRIO Student Support Services (TRIO SSS) at helps first-generation, low-income students and students with disabilities reach their full potential and achieve academic success. We are a supportive academic community committed to student excellence and achievement. Student success is at the center of everything we do in.

The Ronald E. McNair Post-baccalaureate Achievement Program is one of seven federally funded programs under the TRIO umbrella that supports first-generation and low-income students.

Health & Wellness

Wellness is a priority for us. The Health and Wellness website (https://www.ucdenver.edu/student/health-wellness/) is dedicated to providing an exceptional and holistic wellness experience for all CU Denver students. Below are some of the ways that CU Denver supports health and wellness. To learn more about all of the health and wellness services at CU Denver, please visit our website.

Food Resources

CU Denver Food Pantry

Location: 3rd Level in the Lola and Rob Salazar Student Wellness Building
Phone: 303-315-4010
Email: foodpantry@ucdenver.edu
Website: https://www.ucdenver.edu/wellness/matters/food-pantry (https://www.ucdenver.edu/wellness/matters/food-pantry/)

The Lynx Food Pantry is here to help students find more resources to fight food insecurity and lack of nutritious food. CU Denver students have access to free food and hygiene products. For more information about how to utilize the Lynx Food Pantry, hours, volunteering, needed items, and the Lynx Mobile Food Pantry, please visit our website (https://www.ucdenver.edu/wellness/matters/food-pantry/).

Mental Health Resources

Counseling Center

Location: Tivoli Student Union 454
Phone: 303-315-7270
Email: Please refer to website for more information
Website: https://www.ucdenver.edu/counseling-center (https://www.ucdenver.edu/counseling-center/)

The CU Denver Student and Community Counseling Center (SCCC) is available to all enrolled CU Denver students. The counseling center provides strength-based culturally responsive mental health services focused on relationship, support, growth, and solutions. The SCCC uses a brief, goal-directed counseling model that helps students achieve their academic and personal goals. There are no fees for counseling sessions. We also offer an array of other services, such as group therapy, drop-in workshops, and wellness-promotion activities.

The counseling center welcomes all CU Denver students seeking assistance, however the SCCC is not able to provide specialized, more intensive, or long-term clinical services.#Some examples include services that are required for treatment of acute eating disorders, serious substance abuse/dependence, or acute symptoms that require hospitalization. The SCCC is not able to provide specialized assessments such as child custody evaluations or forensic assessments.#If you are seeking long-term treatment or other services beyond the scope of services that the SCCC is able to provide, it is recommended that you receive care by an outside specialist. You can contact us for a list of referrals in the Denver Metro area. If you are unsure whether or not your specific mental health care needs are covered by the counseling center, please contact us and ask to speak with the “on-call counselor” or schedule a consultation appointment with us.

If you would like to learn more about services offered and/or would like to schedule an appointment, please do give us a call at 303-315-7270.

The Phoenix Center

Location: Tivoli Student Union 227
Phone: 303-315-7250
Email: info@thepca.org
Website: https://www.thepca.org/

The Phoenix Center at Auraria (PCA) serves students, staff, and faculty associated with University of Colorado Denver, Community College of Denver, and Metropolitan State University Denver. The PCA provides **free and confidential** resources and assistance to survivors of interpersonal violence (relationship violence, sexual violence, and stalking), as well as their friends, families, and concerned others. The PCA support services include academic advocacy, assistance reporting to the school and/or law enforcement at the survivor's request, safety planning, court accompaniment, emotional support, and more. The PCA also provides campus education and training, awareness raising events, and campus policy guidance.

To learn more about the services provided by PCA, please visit our website (https://www.thepca.org/).

Safety & Support

The Office of Equity

Location: Lawrence Street Center 12th Floor
Phone: 303-315-2567
Email: equity@ucdenver.edu
Website: https://www1.ucdenver.edu/offices/equity (https://www1.ucdenver.edu/offices/equity/)

The Office of Equity's stated mission is to strive to stop, prevent, and remedy discrimination, harassment, sexual misconduct, and any related retaliation; provide education, training and outreach; design policies and procedures to make our campus safer and more inclusive; and ensure all individuals are treated with dignity, compassion, and respect.

The Sexual Misconduct Policy prohibits:

- Sexual Assault: Rape, Fondling, Statutory Rape, and Incest
- Dating Violence
- Domestic Violence
- Sexual Exploitation
- Stalking: Title IX Stalking and Stalking
- Sexual Harassment: Title IX Sexual Harassment Quid Pro Quo, Sexual Harassment Quid Pro Quo, Title IX Hostile Environment, & Hostile Environment

The Nondiscrimination Policy prohibits discrimination or harassment on the basis of:

- Race
- Color
- National Origin
- Sex
- Gender Identity
- Gender Expression
- Sexual Orientation
- Pregnancy
- Disability
- Age
- Creed
- Religion
- Veteran Status
- Political Philosophy
- Political Affiliation

To report an incident of sexual misconduct, discrimination, harassment, or retaliation or to request a training, please contact the Office of Equity at:

- **Phone number:** 303-315-2567
- **Email address:** equity@ucdenver.edu
- **Office address:** Lawrence Street Center, 12th floor, Denver, CO 80204
- **Mailing address:** Campus Box 134, P.O. Box 173364, Denver, CO 80217-3364.
- **Or visit our website for an online report and more information about our policies, procedures, trainings, and other resources:** https://www1.ucdenver.edu/offices/equity (https://www1.ucdenver.edu/offices/equity/)

Dean of Students

Location: 900 Auraria Parkway #309
Phone: 303-315-7310
Email: DeanOfStudents@ucdenver.edu
Website: https://www.ucdenver.edu/student/health-wellness/dean-of-students (https://www.ucdenver.edu/student/health-wellness/dean-of-students/)

The Dean of Students Office supports the CU Denver community by advocating for students, addressing concerns, and promoting wellness and accountability. In partnership with students, faculty, and staff, we foster an environment rich in student success and opportunities for personal growth, while promoting a diverse and inclusive campus community. We serve our talented students by advocating for student needs, addressing issues of wellness and safety, and supporting all students in times of challenge and crisis. We encourage all initiatives that strengthen our campus and community.

Campus Assessment, Response and Evaluation (CARE) Team

Location: Tivoli Student Union, Suite 227
Phone: 303-315-7306
Email: shareaconcern@ucdenver.edu
Website: https://www.ucdenver.edu/student/health-wellness/care-team (https://www.ucdenver.edu/student/health-wellness/care-team/)

Submit a concern at: https://cm.maxient.com/reportingform.php?UnivofColoradoDenver&layout_id=1 (https://cm.maxient.com/reportingform.php?UnivofColoradoDenver&layout_id=1)

The Campus Assessment, Response & Evaluation (CARE) Team is committed to improving campus safety and student success at both the CU Denver | Anschutz Medical Campus.

The CARE Team was created to address the health and safety needs of students and the campus community. We assess whether individuals pose a risk to themselves or others and intervene when necessary. More generally, we identify and provide assistance to those in need.

The team takes a preventative approach to risk assessment by offering resources, referrals, and support to both the concerning individual and those impacted by their behavior.

The Office of Case Management

Location: Tivoli Student Union 309
Phone: 303-315-7306
Email: csm@ucdenver.edu (csm@ucdenver.edu)
Website: https://www.ucdenver.edu/student/health-wellness/case-management (https://www.ucdenver.edu/student/health-wellness/case-management/)

The Office of Case Management was established to better serve the needs of the campus community and struggling students. Case management services include, but are not limited to, providing intervention, advocacy, resources and referrals, as well as follow-up services for students who are experiencing significant difficulties. Case managers support students struggling to navigate the university system, students with current and emerging mental or physical health issues, and students experiencing issues adjusting to academic and social life.

Case Managers coordinate student services and provide referrals to the appropriate resources on campus such as the Office of Community Standards and Wellness, Office of the Registrar, Student and Community Counseling Center, Office of Financial Aid, Disability Resources and Services, Student Mental Health Services, and student advocacy offices.

The Office of Student Conduct and Community Standards

Location: Tivoli Student Union 309
Phone: 303-315-7311
Email: StudentConduct@ucdenver.edu
Website: http://www.ucdenver.edu/life/services/standards/Pages/default.aspx

We serve the university community by meeting the developmental and educational needs of students related to community expectations, civility and respect for self and others. We support community members with conflict management and resolution, and respond to inappropriate and threatening behaviors. We provide student-centered educational services, which promote personal development and individual responsibility. We strive to create a dynamic, open and just environment where civility, cultural competence and learning are expected and celebrated.

All students at the University of Colorado Denver are encouraged to review the Student Code of Conduct (https://www.ucdenver.edu/docs/librariesprovider122/health-and-wellness/cu-denver-student-code-of-conduct---final-with-suspension-update-9-16-20.pdf?sfvrsn=4d0ea7b9_2). This document outlines student rights and responsibilities, behavioral expectations, and the university conduct process.

Campus Safety

Auraria Police Department

Location: 1201 5th Street Suite 110, Denver, CO 80217
Police Dispatch Number: 303-556-5000
Website: https://www.ahec.edu/services-departments/police (https://www.ahec.edu/services-departments/police/)

CAMPUS POLICE MISSION

The Auraria Campus Police Department is committed to enhancing the quality of life on the Auraria Campus by protecting life and property, and providing a wide range of services to prevent crime and resolve problems.

Services *(The Auraria Campus Police Department provides campus services 24 hours a day, 7 days a week.)*

- Crime prevention programs
- Informational services
- Police support to campus staff
- Night escorts to your vehicle
- Security patrols, bicycle patrols, foot patrols
- Vehicle unlocks
- Emergency response (Emergency Phone Map: http://www.ahec.edu/campusmaps/)
- Timely Notification Bulletin for the Auraria Campus
- Immediate notice of crimes affecting the Auraria Campus.

The Auraria Handivan Service is offered Monday through Thursday 7:00 am-10:00 pm and on Friday's from 7:00 am-6:00 pm. Also, take advantage of Auraria's Nightrider escort service. It will take you to any building or parking lot on campus Monday through Thursday, Sundown to 10:00pm. The wait time is usually no longer than 10 minutes. To arrange for the Nightrider, contact the Auraria Parking Office at (303) 556-2001. If the Nightrider is not running, contact the Auraria Campus Police Department at (303) 556-5000 to arrange for an escort to your car.

The Emergency Notification System (ENS) tool provided by the University of Colorado Denver (CU Denver) for students, faculty and staff provides timely life-safety alerts. You are able to receive these alerts via text, voice and email messaging. Your CU Denver email address has already been added to this system. If you would receive emergency alerts on your cell phone, make sure that you enter your cell phone number into the PROFILE section of your student or employee portal at https://my.cu.edu/. **Identify the phone type as a "Cellular" device and check it as the "Preferred" number.**

Wellness

Location: Lola & Rob Salazar Student Wellness Center
1355 12th St
Phone: 303-315-WELL (9355)
Email: lynxwellness@ucdenver.edu
Website: https://www.ucdenver.edu/wellness/

Our Purpose: To promote a culture of belonging through innovative spaces, programs & experiences.
Our Vision: To make wellness a priority for every person in the CU Denver community. To do wellness differently.
Guiding Principles: Learn about our Guiding Principles and Wellness Dimension of the Month (https://www.ucdenver.edu/wellness/about/dimension-of-the-month/).

Seven Dimensions of Wellness

1. Emotional Wellness
2. Physical Wellness
3. Spiritual Wellness
4. Social Wellness
5. Environmental Wellness

6. Financial Wellness
7. Creative Wellness

Club Sports

Location: Lola & Rob Salazar Student Wellness Center
Phone: 303-315-9355
Email: clubsports@ucdenver.edu
Website: https://www.ucdenver.edu/wellness/sports/club-sports (https://www.ucdenver.edu/wellness/sports/club-sports/)

Club Sports is a program designed to provide students with the opportunity to engage in team sports in a friendly and competitive environment. The purpose of the program is to unite individuals with a shared interest in sports, develop lasting friendships, and build community among students across campus, all while increasing their overall well-being through physical activity. Any student who is enrolled in at least 1 credit hour and is paying the Club Sports fee may participate in Club Sports. Students can pick from a variety of sports to participate in and have the chance to serve in a leadership position during their time. All Club Sports serve under the Wellness and Recreation Services department and indoor practice spaces are housed in the Lola and Rob Salazar Student Wellness Center. Club Sports policies and guidelines can be found in the Club Sports Manual.

Student Health Insurance Office

Location: Plaza Building, Suite 150
Phone: 303-615-9999
Email: Please refer to website for more information
Website: https://www.msudenver.edu/healthcenter/

Hours: Monday- Thursday: 8:00am- 5:00pm, Friday 8:00am- 3:00pm

The Student Health Insurance Office strongly encourages all students to have adequate health insurance coverage. The university health plan is designed to coordinate services with the Health Center at Auraria to provide quality health care at the lowest possible cost. **For domestic students, the university health plan is voluntary.** International students with F-1 and J-1 student visas are required to carry the health insurance plan provided by the university. For more information for international students, please visit: https://healthcenter1.com/international-health-insurance-requirement/

Housing, Dining, and Parking

There are a variety of housing, dining, and parking choices available at CU Denver. To learn more, check out the information below.

Housing and Dining

Location: 318 Walnut St
Phone: 303-315-5272
Email: Housing@ucdenver.edu
Website: https://www.ucdenver.edu/housing-and-dining/home (https://www.ucdenver.edu/housing-and-dining/home/)

Although CU Denver is located in the heart of the city, we've always operated with the needs of college students in mind. Whether you're looking for on-campus housing and dining close to classrooms or wish to explore other off-campus options in Denver, we've got the resources to help you find the perfect environment.

Housing

Lynx Crossing Residence Hall

Website:https://www.ucdenver.edu/housing-and-dining/lynx-crossing (https://www.ucdenver.edu/housing-and-dining/lynx-crossing/)

Lynx Crossing is conveniently close to CU Denver and the heart of the city, so you're never far away from your classes or fun. Lynx Crossing offers a wide range of floor plans and other features you can choose from at a fair price for students.

City Heights Residence Hall

Website: https://www.ucdenver.edu/housing-and-dining/city-heights (https://www.ucdenver.edu/housing-and-dining/city-heights/)

CU Denver's First-Year student residential building with dining and campus services. The facility includes two connected building components: a six to seven-story residential tower and a three-story Learning Commons—the home to student life services and faculty development services.

Off-Campus Housing

Off-Campus Housing Database Website: offcampushousing.ucdenver.edu (https://offcampushousing.ucdenver.edu/)

The Office of Commuter Services supports students with commuting resources and an off-campus housing database that can be accessed through the link listed above.

Dining

The Auraria Campus offers multiple dining choices and programs for the CU Denver community. To learn more about dining choices, please visit the following websites:

- Residence Hall Dining (https://lynxdining.sodexomyway.com/)
- Auraria Campus Dining (https://www.ahec.edu/campus-info/food/)
- Discounted Dining in Denver (https://www.ucdenver.edu/student-finances/discounts-deals/food-dining/)

Transportation and Parking

Website: https://www.ucdenver.edu/life/living-on-around-campus/student-transportation-parking (https://www.ucdenver.edu/life/living-on-around-campus/student-transportation-parking/)

A degree should help you get somewhere, and how you get to campus to earn that degree is an important thing to consider. CU Denver students have several options for traveling to and from campus safely and efficiently. CU Denver is conveniently located downtown near multiple light rail stations and bus stops. Bicycle commuting is also a popular option, given Denver's sunny weather, active culture, and miles of protected bike lanes. If you prefer to drive, there are parking spots available, too.

For more information about parking and transportation options, please visit our website (https://www.ucdenver.edu/life/living-on-around-campus/student-transportation-parking/).

Other Student Resources

Feeling like you belong and getting support when you need it—that's what's going to help you reach your goals. As a member of the CU Denver Lynx community, you have access to student services that can support you in so many ways.

Bursar's Office

Location: 5th Floor Student Commons Building, 1201 Larimer Street Suite 1107
Customer Service Phone Center: 303-315-1800
E-mail: bursar@ucdenver.edu
Website: https://www.ucdenver.edu/student-finances/billing-payments (https://www.ucdenver.edu/student-finances/billing-payments/)

When a student begins researching higher education institutions, tuition is often the first stop. The Bursar's Office provides services in the following areas.

- Application Fees Payments
- College Opportunity Fund
- Departmental Deposit Transactions
- Tuition and Fee Payments
- Refunds and Direct Deposits
- Student Account Reconciliation
- Third-Party Billing
- Student Balance Outreach
- Past Due Tuition Collection
- Tax Offsets

For more information for undergraduate students, please visit the Student Finance (p. 50), Tuition and Fees (p. 52), and Billing and Payments (p. 53) sections in the Undergraduate Catalog.

For more information for graduate students, please visit the Student Finance (http://catalog.ucdenver.edu/cu-denver/graduate/student-finances/), Tuition and Fees (http://catalog.ucdenver.edu/cu-denver/graduate/student-finances/tuition-fees/), and Billing and Payments (http://catalog.ucdenver.edu/cu-denver/graduate/student-finances/billing-payments/) sections in the Graduate Catalog.

Financial Aid and Scholarships

Location: 5th Floor Student Commons Building, 1201 Larimer Street Suite 1107
Phone: 303-315-1850
Email: FinancialAid@ucdenver.edu
Website: https://www.ucdenver.edu/student-finances/financial-aid (https://www.ucdenver.edu/student-finances/financial-aid/) and https://www.ucdenver.edu/student-finances/scholarships (https://www.ucdenver.edu/student-finances/scholarships/)

While the world of financial aid can seem intimidating, if you break it down and put in the work, making financial aid work for you will be the first step toward opening a door to your future. The Financial Aid and Scholarships Offices provides services in the following areas.

- How to apply for financial aid
- Aid Eligibility
- Types of Aid
- Financial Aid Policies
- Scholarships
- Work-study and Student Employment Opportunities

For more information for undergraduate students, please visit the Student Finance (p. 50).

For more information for graduate students, please visit the Student Finance (http://catalog.ucdenver.edu/cu-denver/graduate/student-finances/).

Learning Resources Center

Location: Learning Commons, Suite 1231
Phone: 303-315-3531
Email: tutorialservices@ucdenver.edu
Website: https://www.ucdenver.edu/learning-resources-center (https://www.ucdenver.edu/learning-resources-center/)

The CU Denver Learning Resources Center is designed to promote student success, retention, and graduation in a supportive, vibrant and inclusive academic setting. Our services are available to currently enrolled CU Denver undergraduate and graduate students and include free services such as CRLA certified tutoring, Supplemental Instruction (SI), Academic Development Workshops, Student Success Seminars, academic coaching, Conversation Groups, and English for Speakers of Other Languages (ESOL) support.

Lynx Central

Location: Student Commons Building, Suite 1107
Phone: 303-315-5969 (303-315-LYNX)
Email: lynx.central@ucdenver.edu
Website: https://www.ucdenver.edu/student (https://www.ucdenver.edu/student/)

Office Hours: Monday-Friday, 8am-5pm

Lynx Central provides all prospective and current CU Denver students with support throughout the admissions and enrollment process including help with financial aid and scholarships along with registration. Lynx Central staff can also help with general campus questions. For more information, check us out at https://www.ucdenver.edu/student (https://www.ucdenver.edu/student/).

Office of Information Technology

Location: Lawrence Street Center, 1380
Phone: 303-724-4357 (4-HELP)
Email: oit-servicedesk@ucdenver.edu
Website: https://www1.ucdenver.edu/offices/office-of-information-technology (https://www1.ucdenver.edu/offices/office-of-information-technology/)

The Office of Information Technology (OIT) works in partnership with academic and business units to provide technical support to meet the needs of students, faculty and staff at the CU Denver | Anschutz Medical Campus. OIT serves as the primary source of campus wide technology services (https://www1.ucdenver.edu/offices/office-of-information-technology/services/) in partnership with school, college and department IT professionals.

Services range from providing wireless networks, email (http://myemail.ucdenver.edu/) and university passwords (https://passport.ucdenver.edu/passwordreset/), software (https://www1.ucdenver.edu/offices/office-of-information-technology/software/), desktop services, security (https://www1.ucdenver.edu/offices/office-of-information-technology/software/how-do-i-use/cu-secure-and-multi-factor-authentication/), and systems development, to protecting the integrity of the university's data and administrative systems. Additional resources are available from the student technology guide (https://www1.ucdenver.edu/offices/office-of-information-technology/get-

help/cu-denver-student/) and technology tools and software (https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/working-remotely/tools-and-software/) remote learning and working webpages. Please contact the OIT service desk (https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/) for assistance with a service or help troubleshooting technology issues.

OIT also provides student computing services to currently enrolled students within the computer labs (https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/student-labs/) and study spaces located in the North Classroom 1206, Student Commons Building 2nd floor, and the Tivoli 241. The computer labs have Macintosh and Windows-based computers with internet access, as well as printing, scanning, and copying availability with assistance from a lab advisor. For more information about these services, visit the student work spaces and computer labs webpage (https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/student-labs/) or email StudentLabs@ucdenver.edu.

Office of the Registrar

Location: Student Commons Building, Suite 1107
Telephone: 303-315-2600
Fax: 303-315-2550
E-mail: registrar@ucdenver.edu
Website: www.ucdenver.edu/Registrar (http://www.ucdenver.edu/Registrar/)

CU Denver offers students a completely online system of planning their schedules and registering for classes. As a student, you are responsible for knowing the deadlines, rules, regulations, course loads, prerequisites and policies of the university, as well as those of the college or school in which you are enrolled, all of which is provided within this online catalog.

The registrar's office will send an e-mail message to the student's university-assigned e-mail address, inviting the student to register, including registration information and a registration time assignment. Registration is by time assignment only. Students may register via the web on or after their assigned time.

For more information for undergraduate students, please visit the Records and Registration (p. 55) section in the Undergraduate Catalog.

For more information for graduate students, please visit the Records and Registration (http://catalog.ucdenver.edu/cu-denver/graduate/records-registration/) section in the Graduate Catalog.

Ombuds Office

Location: Lawrence Street Center Building, Room 1003
Phone: 303-315-0046
Contact: Melissa Connell, Lisa Neal; **Email:** Melissa.Connell@cuanschutz.edu (Melissa.Connell@ucdenver.edu), Lisa.Neal@cuanschutz.edu (Lisa.Neale@cuanschutz.edu)
Website: www.ucdenver.edu/ombuds (http://www.ucdenver.edu/ombuds/)

The Ombuds Office is a **safe**, confidential, and **nonbiased** resource that members of the University of Colorado Denver | Anschutz Medical Campus can approach to discuss, voice, and clarify any university-related concerns. We are a neutral third-party resource that is available to hear individual complaints and help sort out and **identify options** for resolving those concerns.

The Ombuds Office is well-trained in listening, facilitating, recommending, mediating, and coaching. Each individual on our team is a member of the International Ombudsman Association and are **Certified Organizational Ombudsman Practitioners.**

We even offer trainings and seminars for groups and departments to help learn communication skills, conflict management, and effective team building.

Communications with the Ombuds Office may begin with a phone call, e-mail, letter, or visit. Please contact our office (https://www1.ucdenver.edu/offices/ombudsoffice/) to make an appointment.

Veteran & Military Student Services

Location: Tivoli Student Union, Suite 124
Phone: 303-315-7300
Email: vmss@ucdenver.edu
Website: https://www.ucdenver.edu/veterans (https://www.ucdenver.edu/veterans/)

Veteran & Military Student Services (VMSS) is the initial point of contact for veterans, active-duty service members, reservists, National Guard, and their dependents attending CU Denver. VMSS prioritizes the verification of U.S. Department of Veterans Affairs (VA) education benefit certification for eligible students. This includes ensuring that the VA requirements for attendance, course load, content, and the additional regulations required to receive VA education benefit payments are met by each student. VMSS can assist with problem-solving issues associated with the receipt of VA related educational benefits.

VMSS offers holistic student support services via peer-to-peer mentoring, transition assistance into higher education, scholarships, mental health services specific to the military and transition issues, career preparation through the Boots to Suits program, and providing campus and community resource referrals.

Writing Center

Location: Learning Commons, First Floor
Phone: 303-315-7355
Email: writing.center@ucdenver.edu
Website: https://clas.ucdenver.edu/writing-center/

The Writing Center at CU Denver is a free resource available to all university students who wish to improve as writers. Services include in-person and online one-on-one appointments; an asynchronous Graduate Drop Box for graduate students; an asynchronous After Hours Drop Box for all students; workshops on a variety of topics (for example: citation, literature reviews, C.V.s, and more); and downloadable handouts, podcasts, and videos. Professional Writing Consultants will work on any type of writing and any aspect of the writing process, including (but not limited to) idea-generation, organization, thesis development, source usage, and grammar. Students bring in documents ranging from resumes, personal statements, and research essays to theses, rhetorical analyses, and grant applications. All writing is welcome. Interested students can schedule appointments (required) online and get more information (hours, directions, etc.) about each of our 9 locations/services for students right from the homepage (https://clas.ucdenver.edu/writing-center/). Please check the website for each location's hours of operation and availability.

- CU Denver: Learning Commons wing of the City Heights Residence Hall, first Floor
- CU Anschutz: Strauss Health Sciences Library 1204
- Auraria Library: Space 108, 1st floor (near the 10th Street entrance, west side of building)
- Business School: Cordillera Conference Room, 1st floor
- Lynx Crossing Residence Hall (residents only): Cyber Café, 1st floor
- Online (real-time) consultations
- Undergraduate Drop Box, Graduate Drop Box, and Faculty Drop Box

University and Campus Policies

University System Policies

Phone: 303-860-5711
Website: https://www.cu.edu/ope (https://www.cu.edu/ope/)

The University of Colorado System Office of Policy and Efficiency (https://www.cu.edu/ope/) - with input from system and campus policy owners - develops, oversees and maintains the University's system wide policy-making process; facilitates the development, review, approval, and maintenance of University-wide policies.

Policies include:

- Intercampus Enrollment and Tuition
- Adopting Standards for Intercampus Transfer of Credits
- Sexual Misconduct, Intimate Partner Violence, and Stalking
- Digital Accessibility
- Uniform Grading Policy

Campus Policies

Phone: 303-315-2102
Email: policy@ucdenver.edu
Website: http://www.ucdenver.edu/policies (http://www.ucdenver.edu/policies/)

The Campus Policy Office resides in the Provost Office. This office oversees all development, coordination, management, rescissions and archives for all CU Denver and CU Anschutz campus policies.

Policies include:

- Academic Standing for Undergraduates
- Academic Internships
- Denver Campus Enrollment and Billing
- Four-Year Graduation Guarantee
- Grade Forgiveness
- International Travel Policy for Students
- Transferring Undergraduate Credit

Academic Integrity And Discipline Policies

CU Denver defines academic misconduct and sets forth a uniform process for handling allegations of student academic misconduct at CU Denver. As members of the CU Denver community, students are expected to know, understand, and comply with the standards of the University and to accept the responsibility to maintain the highest standards of intellectual honesty and ethical conduct in completing all forms of academic work at the university. In particular, students must refrain from academic misconduct, defined in the policy as

1. a student's use of unauthorized assistance with intent to deceive an instructor or other person who is assigned to evaluate the student's work in meeting course and degree requirements, or
2. actions that interfere with the ability of the instructor to fairly judge the work of the student or other students.

Academic integrity standards assist in promoting an academically sound, fair, and respectful community. CU Denver views the Academic Integrity process set forth in this policy as a learning experience that can result in growth and personal understanding of one's responsibilities and privileges within both the CU Denver community and the greater community. All students must adhere to these standards. Students who allegedly violate these standards and commit academic misconduct will be subject to the procedures described in this policy. Academic dishonesty is academic in nature, and students are encouraged to contact their academic advisor for details of the campus policy and procedures centered on the academic integrity policy.

Forms of Academic Dishonesty (Refer to Campus Policy 7050 for full policy **(**http://www.ucdenver.edu/policies/**))**

Students are expected to know, understand and comply with the ethical standards of the university. Academic dishonesty is defined as a student's use of unauthorized assistance with intent to deceive an instructor or other such people who may be assigned to evaluate the student's work in meeting course and degree requirements. Examples of academic dishonesty include, but are not limited to the following:

1. *Plagiarism*

   Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. The incorporation of another person's work into one's own requires appropriate identification, regardless of the means of appropriation.
2. *Cheating*

   Cheating involves the possession, communication or use of information, materials, notes, study aids or other devices not authorized by the instructor in an academic exercise or communication with another person during such an exercise for the purpose of obtaining or providing unauthorized information or materials.
3. *Fabrication and Falsification*

   Fabrication involves inventing or counterfeiting information, i.e., creating results not obtained in a study or laboratory experiment. Falsification, on the other hand, involves the deliberate alteration or changing of results to suit one's needs in an experiment or other academic or creative exercises.
4. *Multiple Submissions*

   This is the submission of academic work for which academic credit has already been earned, when such submission is made without instructor authorization.
5. *Misuse of Academic Materials*

   The misuse of academic materials includes but is not limited to the following: stealing or destroying library or reference materials, computer programs, another student's notes or materials or

illegitimate possession of examination materials, forgery, falsification of university documents.

6. *Complicity in Academic Dishonesty*

   Complicity involves knowingly allowing or contributing to another's academic misconduct.

School/College Specific Policy

Business School (p. 134)
College of Engineering, Design and Computing (p. 296)
College of Liberal Arts and Sciences (p. 380)

Disruptive Student Behavior

Students are required to adhere to the behavioral standards listed in the Student Code of Conduct and the course syllabus and to refrain from disrupting classes and other academic settings.

What Constitutes Disruption? "Disruption," as applied to the academic setting, is defined as behavior a reasonable faculty member would view as interfering with normal academic functions (teaching, learning, and research). Examples include, but are not limited to: persistently speaking without being recognized, persistently interrupting other speakers, behavior which distracts the class from the subject matter or discussion, personal insults to the faculty member or other students, abusive behavior (as identified in the CU Denver Student Code of Conduct), refusal to comply with faculty direction, or verbal or physical threats.

Disagreement with the course instructor or other students, during times when the instructor permits open discussion, is not in itself disruptive behavior and is not necessarily prohibited.

Some students engaging in disruptive behavior may have developmental or other related disabilities. Although such students may be considered to have disabilities and to have protections under the Americans with Disabilities Act and the Rehabilitation Act, these students are held to the same standards of conduct and behavior as any other student. Faculty are asked to refer students to any of the resources listed at the end of this policy statement as appropriate.

Where this policy conflicts with the Student Code of Conduct, this policy will prevail with regard to disruptive behavior in the academic setting.

Please refer to Policy 7004 for the full policy (http://www.ucdenver.edu/policies/).

Email Account

Email is an official means for communication within CU Denver. Therefore, CU Denver has the right to send communications to students/staff/faculty via email and the right to expect that those communications will be received and read in a timely fashion.

FERPA: Family Educational Rights and Privacy Act

FERPA is a federal privacy law that protects students' educational records. Under this law, students have three primary rights:

- Inspect and review their education records.
- Seek to amend incorrect education records.
- Have some control over the disclosure of information from their education record.

FERPA directory information is information contained in a student's education record that generally would not be considered harmful or an invasion of privacy if disclosed. Under current CU Denver policy, the following information is designated as directory information:

- Student name. If provided, a preferred name will be used when there is not a documented business or legal reason to provide a student's primary name. Students may also select a diploma name for graduation and commencement materials.
- Hometown (city, state).
- Campus email address.[1]
- Dates of attendance.
- Previous educational institutions attended.
- School/college or division of enrollment.
- Majors, minors and field of study.
- Classification level (e.g., freshman, sophomore, graduate student).
- University-recognized honors and awards.
- Degree status (e.g. expected graduation date and/or conferral dates/terms).
- Enrollment status.
- Employment related to student status (e.g. teaching assistant, resident assistant or work-study) and dates for positions held.
- Participation in officially recognized activities/sports, including height and weight of athletes.
- Photos and videos taken or maintained by the university.

[1] Campus email addresses are only disclosed to requestors who agree not to use them for solicitation.

Although these items are designated by CU Denver as directory information, only a limited amount of this information is routinely disclosed by CU Denver university officials. The university retains the discretion to refuse disclosure of directory information if it believes such disclosure would be an infringement on student privacy rights.

Students may ask the University not to publicly disclose directory information. Be aware, however, if you are seeking employment, the Registrar's Office cannot release your enrollment, degree status or major to anyone unless you come to the Registrar's Office with a photo ID.

Forms to prevent disclosure of directory information can be obtained at the Registrar's Office, located in the Student Commons Building, or via the Registrar's website at www.ucdenver.edu/registrar (http://www.ucdenver.edu/registrar/).

Information that is never released without your consent includes grades, tuition/fees owed, financial aid, etc. If you would like to give permission to someone else to have access to that information, you can submit a Release of Confidential Information Form to the Office of the Registrar. This form also must be submitted in person.

More information about FERPA can be found in the University Catalog. If you have questions regarding your rights under FERPA, please contact the Office of the Registrar.

Denver Campus:
Phone: 303-315-2600
Fax: 303-315-2550
Email: registrar@ucdenver.edu

Website: www.ucdenver.edu/registrar (http://www.ucdenver.edu/registrar/)

Student Bill of Rights

The University of Colorado Denver subscribes to the Student Bill of Rights as defined in 23-1-125 of the Colorado Revised Statutes. Students enrolled in public institutions of higher education shall have the following rights:

1. Students should be able to complete their associate of arts and associate of science degree programs in no more than sixty credit hours or their baccalaureate programs in no more than one hundred twenty credit hours unless there are additional degree requirements recognized by the commission;
2. A student can sign a two-year or four-year graduation agreement that formalizes a plan for that student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission;
3. Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees;
4. Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education;
5. Students, upon completion of core general education courses, regardless of the delivery method, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education;
6. Students have a right to know if courses from one or more public higher education institutions satisfy the students' degree requirements;
7. A student's credit for the completion of the core requirements and core courses shall not expire for ten years from the date of initial enrollment and shall be transferrable.

Student Code of Conduct

The complete Code of Conduct, including a detailed explanation of the conduct process and sanctions, can be found online on the Student Conduct and Community Standards website (https://www.ucdenver.edu/student/health-wellness/student-conduct/) with the full policy here (https://www1.ucdenver.edu/docs/librariesprovider122/health-and-wellness/cu-denver-student-code-of-conduct---final-with-suspension-update-9-16-20.pdf?sfvrsn=4d0ea7b9_2).

You can also visit the Student Conduct and Community Standards office in the Tivoli Student Union Room 309.

Article 7, Part B of the Laws of the Regents (https://www.cu.edu/regents/regent-laws/) requires each campus to develop a student code of conduct and related processes. The Dean of Students is the designated authority to establish and enforce the CU Denver Student Code of Conduct. Any questions regarding interpretation of this document or any of its provisions should be directed to the Dean of Students or their designee for final determination.

The Dean of Students and/or their designee shall appoint student Conduct Educators and Appeal Readers. The Director of Student Conduct and Community Standards or their designee shall determine which Conduct Educator shall be assigned to hear each matter.

The Dean of Students and/or their designee shall develop policies for the administration of the student conduct process and procedural rules. Decisions made by a Conduct 5 Educator shall be final, pending the appeal process. Proceedings initiated under this policy are separate from civil or criminal proceedings that may exist in connection to the same incident. Investigations or conduct proceedings by the university may not be postponed while criminal or civil proceedings are pending, unless otherwise determined by the assigned Conduct Educator.

The CU Denver Student Code of Conduct shall apply to a student's behavior that violates local, state, federal, or university laws, policies, or regulations, and as a result can adversely affect the university community or damages the institution's reputation or relations with the greater community. A student's behavior may be addressed through the student conduct process if it occurs on campus, off campus, or at university sponsored programs or activities, including, but not limited to, study abroad programs, alternative break trips, and student organization sponsored events and programing.

The CU Denver Student Code of Conduct shall apply to a student/campus organization's behavior that adversely affects the university community, violates local, state, federal, or university laws, policies, or regulations, or damages the institution's reputation or relations with the greater community. A student/campus organization's behavior may be addressed through the Organizational Conduct Process if it occurs in connection with a campus organization. An organization's involvement in the Organizational Conduct Process does not preclude one or more individuals from being held accountable through the student conduct process for behavior connected to the same incident.

Prohibited Student Behavior

The following has been developed in accordance with CU Regent Law 7.B.1. and Regent Policy 7.B.1. All behaviors contained in this Student Code of Conduct are subject to the Student/Organizational Conduct Process.

1. Abusive Behavior: Engaging in any act or acts that, based on a reasonable person standard, would cause substantial emotional distress to the impacted party or parties, including, but not limited to: a. Verbal abuse b. Intimidation c. Coercion NOTE: This policy should not be construed, and will not be enacted, to deny any student the right of free speech and expression.
2. Aiding and Abetting: Attempting to commit, aid, abet, or incite others to engage in behavior prohibited by law, the CU Denver Student Code of Conduct, the CU Housing & Dining Handbook, or other AHEC or university policies
3. Alcohol: Violating any local, state, federal, or university law, policy, or regulation pertaining to alcohol, including, but not limited to:
    a. Manufacturing, selling, or providing alcohol to an individual(s) under the age of 21
    b. Possessing or using alcohol while under the age of 21
    c. Using alcohol on campus, regardless of age, with the exception of responsible use at an authorized restaurant or event and in compliance with the CU Denver Housing & Dining policy
    d. Being in the presence of alcohol or alcohol use on campus when knowledge of the alcohol or alcohol use is reasonable with the exception of responsible use at an authorized restaurant or event and in compliance with the CU Denver Housing & Dining policy
    e. Using or possessing alcohol in the presence of an individual(s) under the age of 21 on campus, with the exception of responsible use at an authorized restaurant or event

   f. Attending classes or university functions under the influence of alcohol
4. Bullying: Engaging in severe aggressive behavior likely to intimidate or intentionally harm, control, or diminish another person, physically or mentally
5. Cyberbullying: Tormenting, threatening, harassing, humiliating, embarrassing, or otherwise targeting of another person by an individual using the internet, interactive and digital technologies, or mobile telephones
6. Disrupting Emergency Response: Engaging in any act(s) that interfere with, obstruct, or disrupt the response or official action of an emergency responder, including, but not limited to:
   a. Interfering with the performance of police or fire department duties
   b. Resisting arrest
   c. Failing to abide by the directions of a police officer
7. Disruption: Materially and substantially interfering with, obstructing, or disrupting a normal university activity, including, but not limited to:
   a. Behavior resulting in injury to persons or damage to property on the campus
   b. Interference, obstruction, or disruption of the freedom of movement of students or other members of the university community and their guests
8. Driving Under the Influence: Driving under the influence of, or while one's ability is impaired by, alcohol, marijuana, or other illicit or prescription drugs
9. Failure to Comply: Failing to comply with the direction of employees of CU Denver, CU Denver Housing & Dining, and AHEC who are performing their duties
10. Failure to Report: Failing to report the behavior of another individual/student when that behavior may be a violation of any local, state, federal, or university law, policy, or regulation including, but not limited to, the CU Denver Student Code of Conduct, the CU Denver Housing & Dining Handbook, or other AHEC or university policies
11. False Information: Providing false or misleading information, including, but not limited to:
   a. Making a false statement to emergency responders or an employee of CU Denver, CU Denver Housing & Dining, and AHEC who is performing their duties
   b. Using a false identification or the identification of another to gain entrance to a facility or business
   c. Forging, altering, falsifying, or misusing documents or records
   d. Using or possessing forged, altered, or false documents or records
12. Fighting: Assaulting another person, being involved in a fight or brawl, or physically harming another person
13. Fire Safety: Violating local, state, federal, or campus fire policy, including, but not limited to:
   a. Intentionally or recklessly causing a fire
   b. Tampering with, impairing, disabling, or misusing fire protection systems such as smoke detectors, fire extinguishers, sprinklers, and alarms
   c. Failing to evacuate a university controlled building during a fire alarm
   d. Improper use of university safety equipment
14. Hazing: Engaging in or planning any act, typically associated with belonging to a group of peers, which may produce, or is intended to produce, mental or physical discomfort, embarrassment, harassment, or ridicule, or any acts which are humiliating, intimidating, or demeaning, or that endanger the health and safety of another person, including, but not limited to:
   a. Paddling in any form
   b. Inducement of excessive fatigue
   c. Required exercise inconsistent with the mission of the organization, team, or group
   d. Physical or psychological shocks
   e. Personal servitude
   f. Forced or coerced consumption
   g. Forced or coerced engagement in public stunts, morally degrading or humiliating games and activities, drinking games, late work sessions, other unorganized activities, and other obligations that interfere with scholastic pursuits NOTE: See Appendix 4 – Colorado Law Regarding Hazing
15. Illicit Drugs: Violating any local, state, federal, or university law, policy, or regulation pertaining to federally illegal drugs other than marijuana, including, but not limited to:
   a. Manufacturing, selling, providing, using, or possessing federally illegal drugs other than marijuana
   b. Being in the presence of federally illegal drugs other than marijuana or drug paraphernalia when knowledge of the drugs or drug paraphernalia is reasonable
   c. Attending classes or university functions under the influence of federally illegal drugs other than marijuana NOTE: See Section G.17 for marijuana
16. Inhalants: Using household or industrial chemicals in a manner not intended by the manufacturer with the intention of getting high
   a. Also known as huffing, sniffing, or bagging
17. Marijuana: Violating any local, state, federal, or university law, policy, or regulation pertaining to marijuana, including, but not limited to:
   a. Manufacturing, selling, or providing marijuana without authorization or to an individual(s) under the age of 21
   b. Possessing or using marijuana or drug paraphernalia while under the age of 21
   c. Possessing or using marijuana, including medical marijuana, or drug paraphernalia on campus, regardless of age
   d. Being in the presence of marijuana, marijuana use, or drug paraphernalia that violates policy when knowledge of the marijuana, marijuana use, or drug paraphernalia is reasonable
18. Attending classes or university functions under the influence of marijuana
19. Prescription Drugs: Violating any local, state, federal, or university law, policy, or regulation pertaining to prescription drugs, including, but not limited to:
   a. Manufacturing, selling, or providing prescription drugs
   b. Possessing or using prescription drugs prescribed to another
   c. Using prescription drugs in a manner not prescribed
20. Property Damage: Intentionally or recklessly damaging property that belongs to the university, an organization, or another person
21. Public Exposure: Deliberately and publically exposing one's intimate body parts including, but not limited to:
   a. Public urination and defecation
   b. Mooning
   c. Public sex acts
22. Retaliation: Engaging in retaliatory acts against another person

23. Rioting: Engaging in, inciting, or arming someone for a riot or public disturbance NOTE: See Appendix 5 – Colorado Law Regarding Riots
24. Theft: Taking property of another without permission or possessing property known to be stolen, even with the intent to return the property
25. Threats: Threatening the health or safety of a person(s) that, based on a reasonable person standard, would cause the impacted person(s) distress
26. Unauthorized Presence or Access: Entering into, exiting from, being present in, or accessing property, including, but not limited to, buildings, vehicles, 12 belongings, and digital accounts and systems, that belongs to the university, an organization, or another person without authorization
27. Unauthorized Recording: Making an audio and/or visual recording of another person without the person's expressed permission when such recording could, based on a reasonable person standard, cause the impacted person(s) substantial emotional distress and the storing, sharing, or distribution of such recordings by any means
28. Violation of Law, Policy, or Regulation: Violating any local, state, federal, or university law, policy or regulation; which includes but is not limited to noncompliance with a public health order
29. Violating the CU Denver Housing & Dining Resident Handbook: Engaging in any act or acts that violate any policy or procedure listed in the CU Denver Housing & Dining Resident Handbook while on Lynx Crossing property, regardless of individual student's status as a resident or guest
30. Weapon: Possessing firearms, explosives, fireworks, incendiary devices, ammunition, or other weapons on campus except as permitted by law, or the possession of a harmless instrument designed to look like a firearm, explosive, or dangerous weapon with the intent to cause fear in or assault to another person
    a. NOTE: See Regents Policy 14I (https://www.cu.edu/regents/policy-14i-weapons-control/)
        i. Students, faculty, and staff possessing a valid Concealed Handgun Permit are allowed to carry concealed handguns on campus in accordance with the law.
        ii. CU Denver Housing & Dining does not permit handguns regardless of an individual's possession of a Concealed Handgun Permit.

Student Right-to-Know and Disclosure Information

The University of Colorado Denver | Anschutz Medical Campus would like to welcome you. As a prospective or enrolled student, you have the right to information regarding safety, financial aid, graduation rates, and the various costs associated with attending the university.

The Student Right-to-Know (https://www.ucdenver.edu/student/forms-policies/right-to-know/) webpage provides a full description of disclosures students have the right to know. Additional information related to complaints and grievances may be located on our Student Complaints & Grievances (https://www.ucdenver.edu/student/forms-policies/complaints/) webpage.

Academic Resources

Copyright Infringement

Our community respects the intellectual property of others (i.e. the work or product of faculty, staff, and students). Users of our intellectual property are encouraged to learn about copyright law, fair use, peer-to-peer file sharing, and penalties.

Online Disclaimer and Terms of Use Policy (https://www.ucdenver.edu/docs/librariesprovider284/default-document-library/3000-general-admission/3009---online-disclaimer-and-terms-of-use.pdf?sfvrsn=2f9df3ba_4)

Acceptable Use of Information Technology Resources Policy (https://www.ucdenver.edu/docs/librariesprovider284/default-document-library/5000-information-technology/5001--acceptable-use-of-information-technology-resources.pdf?sfvrsn=5bfdf3ba_2)

Copyright Resources (https://content.cu.edu/digitallibrary/copyright.html)

HIPAA Compliance

The University of Colorado Denver is a Hybrid Covered Entity (HCE) under the Health Insurance Portability and Accountability Act (HIPAA). While the University's activities are primarily under the Federal Educational Rights and Privacy Act (FERPA), parts of University carry on health care activities. Learn more about the University's HIPAA Hybrid Entity Designation (https://www.cu.edu/ope/aps/5055/).

State Authorization

The University of Colorado Denver has been approved to participate in the National Council for State Authorization Reciprocity Agreements (https://nc-sara.org/) and is authorized to provide education to students located outside of Colorado. Learn more about State Authorization (https://www.ucdenver.edu/state-authorization/) and professional licensure.

Teacher Preparation Program Report

Each higher education institution shall report to their home state information regarding their teacher education programs. Information includes program requirements, enrollment data, program completion data, and assessment rates (i.e., number of students granted their teacher certification/licenses).

Please review the Title II State Report (https://title2.ed.gov/Public/Home.aspx) to learn more about individual teaching programs or contact the School of Education and Human Development (https://education.ucdenver.edu/about-us/contact-information/) to learn about their areas of study.

Textbook Information

Textbook information is available in the UCDAccess student portal (https://www.ucdenver.edu/ucdaccess/) alongside class schedules. Information includes ISBN number and price of required and recommended textbooks. The bookstore is located in the Tivoli Station (https://ucdenver.bncollege.com/).

General University Information

College Navigator

College Navigator (https://nces.ed.gov/collegenavigator/?q=University+of+colorado&s=all&id=126562) provides students and parents with a wide range of information on academic programs, retention and graduation rates, student diversity, campus safety, accreditation, and estimated student expenses as well as financial aid availability.

No High Pressure Recruitment Tactics

The University does not condone high pressure recruitment tactics for recruiting any students, specifically those receiving federal funds or military/service members. The University will not engage in harassing,

multiple unsolicited contacts by phone, e-mail, or in-person for purposes of recruitment. The University will train its admissions counselors to not engage in high pressure recruitment tactics.

Student Complaint & Grievances

CU Denver Complaint & Grievances (https://www.ucdenver.edu/student/forms-policies/complaints/) Policies and Procedures are intended to ensure students are treated fairly and equally and their complaints are resolved promptly. Complaints are usually the result of behavior that the student feels is unjust, inequitable, or creates an unnecessary hardship.

Voter Registration

The Colorado Secretary of State (https://www.sos.state.co.us/pubs/elections/vote/VoterHome.html)'s website provides voter registration information.

Health and Safety

Annual Fire Safety and Security Report

The University of Colorado Denver is committed to student and community safety. In compliance with the Jeanne Clery Disclosure of Campus Policy and Campus Crime Statistics Act, information about our efforts, policies, statistics, crime logs and safety policies can be found in the Annual Security and Fire Safety Report (https://www.cuanschutz.edu/police/clery-act/).

Emergency Notification System (CU Alerts!)

Communication plays a critical role before, during, and after any emergency or disaster. The CU Denver Emergency Notification System (CU Alerts!) (https://www.ucdenver.edu/police/cu-alerts!-info---denver/) provides campus emergency alerts via text and/or e-mail when conditions develop on or near CU Denver/Auraria campus, which pose an imminent threat of danger to the campus community. Sign up today!

Drug and Alcohol Abuse Prevention

The University of Colorado Denver is committed to preventing the use of illegal substances and encourage responsible behavior regarding alcohol and legal addictive substances through policy, education, and treatment. You can learn more regarding our institutional policies and prevention program in the Annual Security and Fire Safety Report (https://www.cuanschutz.edu/police/clery-act/), and Wellness Center Health Promotions (https://www.ucdenver.edu/wellness/programs/health-promotions/) program.

Short-term alcohol and other drug counseling is available through the Counseling Center (https://www.ucdenver.edu/counseling-center/services/) for Denver students.

Title IX, Sexual Misconduct and Nondiscrimination

The Office of Equity (https://www.ucdenver.edu/offices/equity/) is the University office designated to respond to issues related to discrimination, harassment, and sexual misconduct, including Title IX. Make a report (https://cm.maxient.com/reportingform.php?UnivofColoradoDenver&layout_id=2).

Vaccination and Immunization Policies

According to Colorado state law and to ensure the health and safety of our campus, proof of immunization is required prior to registering for all freshmen, transfer, and graduate students. Please review the following policies regarding immunization and vaccination, including COVID-19.

Student Immunization Requirements and Compliance (https://www.ucdenver.edu/docs/librariesprovider284/default-document-library/7000-student-affairs/7014---student-immunization-requirements-and-compliance.pdf?sfvrsn=6da8fdba_2)

Bloodborne Pathogens, Exposure Control & Hepatitis B Vaccination Policy (https://www.ucdenver.edu/docs/librariesprovider284/default-document-library/6000-research/6003---bloodborne-pathogens-exposure-control-hepatitis-b-vaccination.pdf?sfvrsn=5fbaf3ba_2)

COVID-19 Vaccination Requirement and Compliance (https://www.ucdenver.edu/coronavirus/)

Student Diversity and Outcomes

Enrollment, Retention, and Graduation Rates

The Annual Diversity Report (https://www.cu.edu/diversity-report-interactive-data/) and the Student Success Dashboards (https://www1.ucdenver.edu/offices/institutional-research-and-effectiveness/data-analysis/studentdata/student-success/) provide information on enrollment, retention, and graduation based on students' ethnicity, gender, financial aid recipients, and students who transferred into CU Denver. Please contact the Office of Institutional Research and Effectiveness (https://www.ucdenver.edu/offices/institutional-research-and-effectiveness/) for more information.

Post Undergraduate Degree Outcomes

The Career Center (https://www.ucdenver.edu/lynxconnect/career-center/) collects information on what our undergraduates do after graduation. The First Destination Dashboard (https://public.tableau.com/app/profile/paula.dickson/viz/CareerCenter_FirstDestination/AdditionalInformation/#1) provides information about continuing education pursued by alumni or the type of employment obtained after graduation.

Undergraduate Catalog

Undergraduate Programs

At CU Denver, we are committed to undergraduate education. Whether you know exactly what you want to study or want to explore different areas that inspire you, our undergraduate programs give you choices—choices in your degree and in your career.

CU Denver programs are varied and extensive. Students can major in everything from accounting to creative writing, from pre-health #to environmental studies, from elementary education to digital design. You can customize your degree (p. 1289) by adding a minor in anything from biophysics to women's & gender studies. No matter your area of interest, you will find academic opportunities here.

- Admissions (p. 37)
- Student Finances (p. 50)
- Tuition Classification (p. 53)
- Records and Registration (p. 55)
- Academic Policies and Procedures (p. 109)
- Undergraduate Advising and Other Student Services (p. 112)
- Undergraduate Core Requirements (p. 122)
- Graduation (p. 126)
- Schools, Colleges, and Departments (p. 129)
- Courses A-Z (p. 1005)
- Programs A-Z (p. 1289)

Admissions

CU Denver's Admissions Offices welcomes inquiries from prospective students regarding undergraduate admission. Some of the services that we offer include:

- Application: pick up, drop off, and admission status
- Residency information for students applying to CU Denver for the first time
- Information about establishing domicile for tuition classification
- General transfer credit information
- Information about CU Denver
- Scholarship guides
- Talk to an admissions counselor

Please visit our offices below for more information:

- Undergraduate Admissions (p. 37)
- International Admissions (p. 43)
- Transfer Student Admission (p. 38)

Undergraduate Admissions

General Contact Information for the Office of Undergraduate Admissions

Physical Address:
1201 Larimer Street, Suite 1005
Denver, CO 80204

Mailing Address:
Campus Box 167
PO Box 173364
Denver, CO 80217-3364

Telephone: 303-315-2601
E-mail: admissions@ucdenver.edu
Website: https://www. (https://www.ucdenver.edu/undergraduate-admissions/home/)ucdenver.edu/undergraduate-admissions/home (https://www.ucdenver.edu/undergraduate-admissions/home/)

Overview

(Applies to Fall 2023, Spring 2024 and Summer 2024)

The University of Colorado Denver provides a diverse array of baccalaureate majors, minors, certificates, and teacher licensure options to meet the ever-challenging demands of a global society. Undergraduate education programs consist of a general core curriculum, a major, and elective courses for all areas of study. The campus-wide core curriculum develops proficiency in writing and mathematics, cultivates a breadth of knowledge, promotes critical thinking, allows for the flexibility to meet career goals, and helps develop sensitivity to cultural diversity and international perspectives.

A list of all undergraduate programs, including minors and online programs, is available by clicking here *(*p. 1289*).*

Everyone is welcome to apply *(*https://www.ucdenver.edu/admissions/-apply-now/*). CU Denver values a culture of inclusion and does not discriminate on aspects of identity, including but not limited to gender, race, ethnicity, sexual orientation, ability status, veteran status, nationality, citizenship, religion, and socioeconomic background.*

CU Denver seeks to identify applicants who are likely to be successful in a rigorous academic program of study. Admission decisions are based on many factors, the most important being:

- Previous academic performance
- Evidence of academic ability and accomplishment
- Evidence of maturity, motivation, and potential for academic success

CU Denver may deny admission to applicants or readmission to former students whose total credentials indicate an inability to assume obligations of performance and behavior deemed essential by the university.

After completing the application process, official notification of your admission status is provided by the Office of Undergraduate Admissions.

Note: The University of Colorado Denver reserves the right to change the admission decision at any time if additional credentials are received that affect your qualifications.

Application Deadlines

Semester	Date
Fall 2023	July 31, 2023
Spring 2024	January 2, 2024
Summer 2024	May 1, 2024

The university may change document/credential deadlines in accordance with enrollment demands. For the best scholarship and registration time considerations, applicants should apply as early as possible. Admission to the university does not guarantee the availability of desired courses. For an applicant to be considered for a specific term, all documents required for admission must be received by the deadline for that term. Applicants who are unable to meet the deadline may elect to be submit a request to be considered for a later term. Please allow sufficient time to have transcripts sent from previously attended institutions.

Freshman Student Admission

The University of Colorado Denver considers a number of factors in determining student's academic success. CU Denver follows Colorado Department of Higher Education (CDHE) freshman admission standards and uses the average GPA and ACT/SAT middle 50 percent ranges to help determine admissibility. Meeting or not meeting the middle 50 percent does not guarantee admission.

Applicants are considered under freshmen admission standards if:

- applying for the first time after graduating from high school or passing a high school equivalency exam; and/or
- earned fewer than 24 college-level credit hours since high school graduation.

Note: College credits earned while in high school may be transferable to the university but are not required for an admission decision.

Admission Consideration by Academic Program

In addition to the above admission standards, each school/college within CU Denver has admission criteria specific to their area.

- College of Architecture and Planning (p. 189)
- College of Arts & Media (p. 209)
- Business School (p. 131)
- School of Education & Human Development (p. 876)
- College of Engineering, Design and Computing (p. 294)
- College of Liberal Arts and Sciences (p. 373)
- School of Public Affairs (p. 966)

How to Apply for Freshman Admission

1. Complete and submit your application online at www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/).
2. Pay your $50 non-refundable application fee. **Note:** You can indicate your eligibility for a fee waiver when you apply.
3. Send official (p. 47) high school transcripts or high school equivalency exam scores to the Office of Undergraduate Admissions mailing address or electronically (p. 47).
   a. *For high school graduates:* An admission decision can be determined before high school graduation. However, if admitted to CU Denver, a final official high school transcript with a graduation date will be required.
   b. *For high school equivalency exam recipients:* Students who did not graduate from high school are required to have a copy of their high school equivalency exam test scores and certificate sent directly from the certifying agency to the CU Denver Office of Undergraduate Admissions.
4. **CU Denver is test-optional and does not require test scores for admission consideration.** It is up to the applicant if they want their test score to be considered in the admission process. Applicants who choose not to submit a test score for admission will be considered the same as students who submit test scores. There is no penalty for not submitting a test score. Those choosing to submit test scores, can send official SAT or ACT scores to the Office of Undergraduate Admissions mailing address or electronically.
   - Scores reported on official high school transcripts are considered official test scores (p. 47). Otherwise, please request test score reports from the offices listed below:

American College Testing Program (ACT)
P.O. Box 451
Iowa City, Iowa 52243
319-337-1313
www.ACT.org (http://www.ACT.org)
school code: 0533

The College Board (SAT)
P.O. Box 8057
Mount Vernon, IL 62864
866-756-7346
www.collegeboard.org (http://www.collegeboard.org)
school code: 4875

Higher Education Admission Requirements (HEAR)

First-time freshmen as well as transfer applicants with fewer than 30 credit hours who graduated from high school in spring of 2008 or later must meet the state of Colorado Higher Education Admission Requirements (HEAR) for high school units of study. College courses taken before or after graduation from high school can be considered toward fulfillment of HEAR unit requirements for admission consideration.

For students who graduated in 2008 or 2009, the following minimum high school courses (units) are required:

Subject	Year (Units)
English	4 years (units)
Mathematics	3 years (units)
Natural Science	3 years (units), 2 of which must be lab-based
Social Studies	3 years (units), 1 of which must be United States or world history
Academic Electives	2 years (units)

For students who graduated in 2010 or later, the following minimum high school courses (units) are required:

Subject	Year (Units)
English	4 years (units)
Mathematics	4 years (units)
Natural Science	3 years (units), 2 of which must be lab-based
Social Studies	3 years (units), 1 of which must be United States or world history
Foreign Language	1 year (unit), must be in a single language
Academic Electives	2 years (units)

Students with HEAR deficiencies may be considered for admission on an individual basis based on the rigor of units completed as well as other admission criteria (e.g., test scores and GPA).

Transfer Student Admission

Applicants are considered transfer students for admission purposes if they have completed any number of college courses after graduating from high school or passing a high school equivalency exam. Applicants with college courses taken prior to high school graduation are considered freshmen (p. 37) for admission purposes.

Transfer students who graduated from high school in 2008 or later and have fewer than 30 college credits completed at the time of application are subject to HEAR (p. 38) requirements.

Transfer Admission Consideration

At the time of application, admission consideration is determined by the following:

- Applicants with 23 or fewer semester hours of completed college-level course work[1] are considered for admission as freshmen based on high school GPA or high school equivalency exam scores and if applicant chooses to submit, ACT or SAT scores can be considered.
- Applicants with 24 or more semester hours of completed college-level course work[1] are considered for admission based upon college course work alone.

[1] College-level coursework must be completed at a regionally accredited institution as outlined in transfer credit policy on accreditation (p. 76).

Transfer Admission Criteria by Academic Program

(For applicants with 13 or more credits of completed college-level coursework at time of application)

College of Architecture and Planning

For admission to the College of Architecture and Planning, applicants must have a 2.750 cumulative GPA. Applicants with at least a 2.300 cumulative GPA may be considered on an individual basis if the academic record shows consistent improvement and/or strong performance in science, mathematics, art, or architecture-oriented courses. Applicants not meeting requirements for direct admission to the College of Architecture and Planning may be considered for admission to the College of Architecture and Planning with a Pre-Architecture interest.

College of Arts & Media

For admission to the College of Arts & Media, a minimum 2.400 cumulative GPA is required; however, students with a 2.000 cumulative GPA are considered.

- Music & Entertainment Industry Studies (MEIS): In addition to being admitted to CU Denver, applicants to one of the audition track programs in the *Music and Entertainment Industry Studies (MEIS)* Department must complete additional music application requirements. Please review the music section on our How To Apply webpage (https://artsandmedia.ucdenver.edu/prospective-students/how-to-apply/) for complete information about the audition/application process for audition track program applicants. Applicants to the MEIS non-audition track programs do not have to audition or complete any additional requirements
- Film & Television: The Film and Television Department requires that applicants complete a secondary Film & Television application in addition to being admitted to CU Denver. Please review the film section on our How To Apply webpage (https://artsandmedia.ucdenver.edu/prospective-students/how-to-apply/) for complete information about the secondary application for Film & Television program applicants.

Business School

For admission to the Business School, a minimum 2.400 cumulative GPA is required; however, applicants with a 2.000 cumulative GPA are considered.

Note: Students who have completed an undergraduate degree in business will not be accepted for a second undergraduate degree-seeking status in the Business School. These students are encouraged to pursue a graduate degree in business.

School of Education & Human Development

For admission to the School of Education & Human Development, a minimum 2.000 cumulative GPA is required for non-licensure programs, including Human Development and Family Relations, BS and Education and Human Development, Early Childhood Education Non-Licensure, BA*.

For admission to the EDHD BA licensure program, a cumulative GPA of 2.400 is required.

**Students who already hold a BA/BS degree and are interested in teacher licensure are encouraged to contact the School of Education & Human Development for information on graduate teacher licensure options.*

Note: The Professional Year, a two-semester (fall and spring) residency in the student's final year of the undergraduate degree with licensure programs, requires a separate application and acceptance is not guaranteed. For instructions and minimum requirements, please see the Education and Human Development website (https://education.ucdenver.edu/academic-services/admissions/).

College of Engineering, Design and Computing

For direct admission to the College of Engineering, Design and Computing, transfer applicants meet the following criteria:

Direct Admission to:

BS in Civil Engineering
BS in Construction Engineering and Management
BS in Computer Science
BS in Electrical Engineering
BS in Mechanical Engineering
BS in Bioengineering

Criteria:

- Minimum 3.000 cumulative high school GPA with a grade of B- or better in Calculus I **or**
- Minimum 2.75 overall GPA **and** a minimum 2.5 GPA (based on most recent course attempts) in Calculus I, Calculus II, and Calculus-based Physics I with corresponding lab, with a grade of C- or better in each course.

Note: For admission into the Computer Science major, Calculus-based Physics I **is not** required, but will be accepted. In addition, department chairs may consider the utilization of any subsequent math courses for the Calculus I/Calculus II/Physics GPA requirement.

Direct Admission to:

BA in Computer Science
BS in Construction Management

Criteria:

- Minimum 2.5 overall GPA
- Completion of at least one of the following courses with a grade of C or better:
  - College Algebra,
  - College Trigonometry,
  - Pre-Calculus,
  - Calculus I, or
  - Calculus II

Admission to Pre-Engineering

Students who do not meet the criteria for direct admission to a major will be considered for admission to the Pre-Engineering **with a major interest**.

Criteria:

- Minimum 2.5 overall GPA
- Completion of at least one of the following courses with a grade of C or better:
  - College Algebra,
  - College Trigonometry,
  - Pre-Calculus,

- Calculus I, or
- Calculus II

Admission to CLAS - Undeclared
Transfer students who do not meet the criteria for direct admission to a major or Pre-Engineering, but otherwise meet the University's admission criteria, will be admitted to CLAS as an undeclared major, or in the case of an IUT, remain in their current CU Denver school or college.

Notes: CU Denver students may apply to a major or Pre-Engineering major through an Intra-University Transfer (IUT) (https://www.ucdenver.edu/registrar/student-resources/forms/) ***after*** they have completed 12 or more CU Denver credit hours. Please visit the College of Engineering, Design and Computing website (https://engineering.ucdenver.edu) for additional information.

College of Liberal Arts and Sciences

For admission to the College of Liberal Arts and Sciences, a minimum 2.400 cumulative GPA is required; however, applicants with a 2.000 cumulative GPA are considered.

School of Public Affairs

For admission to the School of Public Affairs, a minimum 2.400 cumulative GPA is required; however, applicants with a 2.000 cumulative GPA are considered.

How to Apply as a Transfer Student

1. Complete and submit your application online at www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/).
2. Pay your $50 nonrefundable application fee. **Note:** You can indicate your eligibility for a fee waiver when you apply.
3. Request official (p. 47) transcripts from each regionally accredited (p. 75) college or university attended, including foreign institutions. Official transcripts should be sent directly to the CU Denver Office of Undergraduate Admissions mailing address or electronically:

The Office of Undergraduate Admissions
University of Colorado Denver
Campus Box 167
PO Box 173364
Denver, CO 80217-3364

OR

admissionstranscript@ucdenver.edu (admissionstranscript@ucdenver.edu)

Second Bachelor's Degree Admission

Applicants who already hold a bachelor's degree may apply for admission to complete a second bachelor's degree. Students cannot apply to the same major in which they previously have received a bachelor's degree. If you do not plan to complete a second bachelor's degree (only need to complete pre-requisites), you must apply as a ***graduate*** non-degree.

Note: There are implications for students wishing to pursue a second bachelor's degree in the Business School (p. 130) or the School of Education & Human Development (p. 876).

How to Apply as a Student Seeking a Second Bachelor's Degree

For instructions on how to apply, please visit https://www1.ucdenver.edu/transfer (https://www1.ucdenver.edu/transfer/)

Readmission Requirements for Former Students

Degree-seeking students who have not attended classes on the Denver Campus for one year (three semesters) or longer must apply for readmission by completing an online application. The University of Colorado transcripts (Boulder, Colorado Springs, & Denver) are not required; however, official transcripts from each college or university attended following enrollment at CU Denver must be submitted.

Note: The Office of Undergraduate Admissions may require you to resubmit transcripts depending on the desired major.

How to Apply as a Readmit Student

Please visit https://www.ucdenver.edu/admissions/-apply-now (https://www.ucdenver.edu/admissions/-apply-now/) and apply as an undergraduate student.

For readmission information of service members, please click here (p. 43).

Academic Suspension/Probation Review (ASPR) for CU System Students

Transfer/readmit students with a cumulative CU GPA below 2.0 from any University of Colorado campus (Boulder, Colorado Springs or Denver) are subject to additional review by the school or college to which they are applying. Applicants must meet program requirements of the school or college to which they are applying. If requirements are not met, the applicant can be reviewed by the College of Liberal Arts and Sciences for general admission to CU Denver. Applicants should allow additional processing time for this review and contact the school or college advising office for additional information.

Note: Each school and college may also have petition deadlines in place. Due to the time sensitive nature of this process, applicants should contact the school to college advising office as soon as possible.

Applicants who completed high school concurrent courses through any University of Colorado institution and have a GPA below 2.0 are not subject to additional review. However, applicants should be aware that concurrent coursework completed at a University of Colorado institution is counted toward their cumulative CU GPA.

Fresh Start Policy

For more information regarding the Fresh Start policy, please click here (p. 110).

Readmission School/College Specific Policy

College of Arts & Media

All students who have not registered and attended classes at the university for one calendar year (three consecutive semesters, including

summer term) or longer must apply for readmission through the CU Denver Office of Admissions. Former music majors who have not registered at the university for three consecutive semesters (not including summers) may need to re-apply to the Department of Music & Entertainment Industry Studies. Contact caminfo@ucdenver.edu for more details.

Due to the dynamic nature of College of Arts & Media programs, returning students who have not attended in more than five years must complete their programs based on the current curriculum and policies.

Business School

For students newly admitted to the Business School and former business students readmitted to the school after an absence of three semesters, applicable credits up to five years old will be counted toward business degree requirements. Courses more than eight years old will be evaluated individually for their current relevance to the degree program. Students may be required to update their knowledge by taking additional courses when past courses are outdated. Generally, business courses more than eight years old will not apply toward degree credit.

A University of Colorado student from another campus, or a Denver campus student who has not registered for three consecutive semesters (including summer term), is considered a former student and must reapply for admission. Former Denver campus business degree students will be automatically readmitted to the school for up to three years from the semester they last attended if they are in good standing (not on probation or suspension) in the school. Students who have not attended for more than three years, or who have completed the equivalent of 12 or more semester hours at another institution of higher education, must meet the admission and degree requirements applicable at the time they reapply.

School of Education and Human Development

All SEHD students who have not registered and attended classes on the Denver campus for one calendar year (three consecutive semesters, including summer term) or longer must reapply for admission to the Office of Admissions. Students must be in good academic standing to be eligible to gain readmission. Students not in good academic standing will be reviewed on a case-by-case basis.

College of Liberal Arts & Sciences

Students who have attended the University of Colorado, Denver and have been admitted to the College of Liberal Arts and Sciences, but never registered and attended or have not registered for and attended classes on the Denver Campus for one year or longer (three consecutive semesters, including summer term), must reapply for admission through the Office of Admissions (per University policy). Students who are in good academic standing are eligible to gain readmission to the college, but students who are not must follow the academic probation and suspension policies before they can be readmitted.

This policy applies to any student who meets all of the following criteria:

- Is a former degree-seeking CU Denver campus student,
- Is a former declared CLAS student, and
- Has not completed any transfer coursework since leaving CU Denver.

Once the university has readmitted a student, the following guidelines will help to determine the academic requirements and catalog that a student will follow to complete their academic program. These policies apply to all degree granting programs in the College of Liberal Arts and Sciences, including graduate programs, undergraduate majors, undergraduate minors, certificates (graduate, undergraduate and non-degree seeking), unless other program-specific policies are established and explicitly stated in the academic catalog under the academic program requirements. Students should always meet with both their CLAS advisor and program advisor(s) as soon as they are readmitted to make sure that they know what catalog and degree requirements that they must follow. Advisors will make sure that credits are applied to a student's specific degree requirements according to the best fit, and will work with the appropriate graduation certification team to make sure that the student's degree audit (when available) is accurate.

Students who qualify and decide to utilize the Fresh Start Policy will be required to follow the requirements in the current catalog based on their readmission term. They will not be permitted to follow requirements in previous catalog years as outlined below. Additional information about Fresh Start can be found on the Undergraduate Admissions Fresh Start website.

All students are responsible for requisite knowledge for courses with prerequisites. A student may have taken prerequisite coursework, but either because they have been away from the subject matter for any amount of time or because there have been new developments in the discipline in the intervening time may lack some of this requisite knowledge. Students may substantially benefit from retaking prerequisite coursework, though they will not receive duplicate credit for courses that have been taken previously and only one iteration of the course will apply toward fulfilling degree requirements.

If a student has completed a minimum of 60 credit hours that are applicable toward a degree, or the equivalent of half the coursework applicable toward the degree through their last active term, the college will allow the student to choose to either

- Follow the college requirements established in the academic catalog from the admit term of their most recent matriculation, provided that the courses and curriculum are still offered, or
- Follow the college requirements established in the academic catalog under their new admit term.

If a student has completed a minimum of half the coursework applicable toward a major, minor, or certificate program through their last active term, the major department will allow the student to choose to either

- Follow the program requirements established in the academic catalog from the admit term of their most recent matriculation, provided that the courses and curriculum are still offered, or
- Follow the program requirements established in the academic catalog under their new admit term.

Students must meet with their CLAS and departmental advisors when they are readmitted to determine which of these options are available.

If a student has completed less than 60 credit hours that are applicable toward a degree, or less than the equivalent of half the coursework applicable toward the degree through their last active term, the college requires the student to follow the college and program requirements established in the academic catalog under their new admit term.

Any exceptions to this policy will be reviewed by the Academic Standards Committee and approved by the appropriate Associate/Assistant Dean.

Students Returning Who Are in Good Standing

CU Denver students who have not registered and attended classes on the Denver Campus for one year or longer and who have not attended another institution since the University of Colorado are considered returning students and must formally apply for readmission. An additional application fee is only required if changing from undergraduate to graduate or non-degree to degree status, or if a degree was earned and the student is applying for a second degree. Students applying for readmission may complete an online application form at www.ucdenver.edu/ (http://www.ucdenver.edu/admissions/)admissions/-apply-now (https://www.ucdenver.edu/admissions/-apply-now/). A paper application may also be requested by calling 303-315-2601 or by email at admissions@ucdenver.edu.

Students Returning Who Are Not in Good Academic Standing

Students on Suspension

During the one-year academic suspension period, students who wish to return to the university should consider one (or both) of the following actions:

- Attend another regionally accredited college/university.
  - Students who choose to attend another institution while on academic suspension can take as many or as few credits as they choose, but must earn a 2.750 cumulative GPA in all transferable course work.
  - Students should consult their academic advisor to discuss appropriate course work.
- Students should use the time off to directly address and resolve the factors that contributed to the academic difficulty.

After the one-year suspension period has elapsed, students must petition the appellate committee (of the school or college they wish to enter) for readmission and meet and document at least one of the following criteria:

- Attendance at another regionally accredited college/university where they earned a minimum cumulative GPA of 2.750 in transferable credit.
- Explanation of their previous academic difficulty, demonstration of what has changed and how this will allow them to now achieve and maintain good academic standing (including a semester GPA of at least 2.300 and a cumulative GPA of at least a 2.000).

Students who choose to petition their college's appellate committee for re-admission must submit their petitions by the following deadlines:

- For fall admission: June 1
- For spring admission: December 1
- For Maymester/summer admission: April 1

If a student is granted readmission and their CU GPA is below a 2.0, they will be re-admitted **on restricted academic probation**. These students must meet the condition of restricted academic probation every semester until their cumulative CU GPA is at least a 2.000.

Students Who Have Attended Another College or Institution

Students who have attended another college or university since last attending the University of Colorado must apply as transfer students and meet the admission criteria and transfer student deadlines for receipt of documents. This requires payment of the $50 (subject to change) nonrefundable application fee and submission of one official transcript from each college or university attended since last enrollment at CU Denver. Transcripts must be sent directly from the issuing institution. Paper copies must be sent directly to:

Office of Admissions
University of Colorado Denver
Campus Box 167
P. O. Box 173364
Denver, CO 80217-3364

OR

Electronic transcripts are accepted through Parchment/Docufide (https://exchange.parchment.com/u/auth/login/), SENDedu (https://sendedu.org/), etc. and are considered official when received. To send transcripts electronically from a verified sender/school, please send to: admissionstranscript@ucdenver.edu.

Students Who Last Attended Another University of Colorado Institution

Students who last attended another University of Colorado campus as a degree seeking student must formally apply for admission and meet the admission criteria of CU Denver. An application fee is not required unless going from undergraduate to graduate status, from non-degree to degree status, or if a degree was earned. Students may apply online at www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/). If applying online, students should indicate "pay by check" when prompted for application fee payment. The fee requirement is then removed during application processing. Transcripts from another University of Colorado institution are not required, but official transcripts from each college or university attended prior to enrollment at the University of Colorado must be submitted.

Non-Degree Student Admission

Applicants who do not plan to complete a University of Colorado Denver bachelor's degree, may be admitted as non-degree students. Applicants that have already earned a bachelor's degree, should apply as a non-degree graduate student. To change from non-degree to degree-seeking status, applicants need to apply as an undergraduate or graduate degree-seeking student and meet the admission requirements of the intended program of study.

Non-degree eligibility requires a minimum 2.000 cumulative GPA.

Note: For further information on financial implications for non-degree students, please visit the financial aid (p. 50) page.

How to Apply as a Non-degree Student

1. Complete and submit your application online at www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/).

2. Pay your $50 nonrefundable application fee.
3. No additional credentials are required.

High School Postsecondary and Concurrent Enrollment

High school students with demonstrated academic abilities may be admitted to CU Denver with special approval for one term only. This approval may be renewed. Credit for courses taken may subsequently be applied toward a university degree program, if applicable. For more information and application instructions, contact the Office of Admissions, 303-315-2601 or admissions@ucdenver.edu.

Transfer of College Level Credit

For more information on transfer of college level credit, please consult the Records and Registration - Transfer Credit (p. 73) section.

Application Updates

Applicants or admitted students who wish to change the term indicated on their application must submit a term change request to the Office of Undergraduate Admissions prior to registering for and/or attending any classes at CU Denver. Admission can be deferred for up to one year (three semesters) from the initial term indicated on the application. For example, an admitted student that initially applied for Fall 2022 may defer until Fall 2023. A new application is not required for a change up to one year from the initial term indicated on the application.

Note: A maximum of three term change requests per application are honored.

Applicants and admitted students who wish to change the major indicated on their application must submit one of the following requests:

Program/Plan Change

Prior to the first day of classes, the Office of Undergraduate Admissions completes program/plan change requests within or between the University of Colorado Denver schools/colleges. Requests are made through the admissions application portal.

Note: Admissibility into the desired major will be evaluated. Admissibility varies between the University of Colorado Denver schools/colleges. University admission does not guarantee program/plan change approval.

Intra University Transfer

After the first day of classes, students wishing to change from one CU Denver school or college to another must submit an Intra-University Transfer (IUT) (p. 68) form to their intended school.

Change of Major

After the first day of classes, students wishing to change their major within the same CU Denver school or college must submit a Change of Major request to their advisor.

Active Military & Veteran Applicants

The University of Colorado Denver is a Military Friendly institution.

Active military and veteran applicants are offered the following admission benefits:

- Waived application fee
- Waived SAT/ACT if high school graduation was more than five years prior and with the submission of a Joint Services Transcript (JST)

The readmission of service members:

- The University of Colorado Denver will readmit a service member with the same academic status as when they last attended the school or were last accepted for admission to the school while active-duty. This applies to any readmitted student who could not attend school due to military service.
- The student must notify VMSS of their military service and intent to return to school.
- VMSS will work with the appropriate offices to assist in the readmission of the student in the next applicable term.

Note: For additional information on transfer credit and other university benefits, please contact Veteran and Military Student Services (VMSS) at vmss@ucdenver.edu.

International Admissions

Director of International Enrollment Strategy and Admissions: Clay Harmon

Physical Address:
Student Commons Building, Suite 1119
1201 Larimer Street, Denver, CO 80204

Mailing Address:
Campus Box A005
PO Box 173364
Denver, CO 80217-3364

Telephone: +1 (303) 315-2382
Email: intladmissions@ucdenver.edu
Website: http://internationaladmissions.ucdenver.edu (http://internationaladmissions.ucdenver.edu/)

Overview

CU Denver International Admissions manages the admission process for international undergraduate applicants who currently have or will require a temporary, non-immigrant visa to study in the United States. Advisors are available to help you through the entire application process.

We also evaluate international academic credentials for US citizens, permanent residents, and other undergraduate applicants who have studied outside the United States before studying at CU Denver | Anschutz Medical Campus.

This page contains information for international applicants to undergraduate programs. For information about applying to a graduate program as an international student, please visit this page (http://catalog.ucdenver.edu/cu-denver/graduate/international-admissions/).

Application Information for Undergraduate International Students

The University of Colorado Denver provides a diverse array of baccalaureate majors, minors, certificates, and teacher licensure options to meet the ever-changing demands of a global society. Undergraduate education programs consist of a general core curriculum, a major, and elective courses for all areas of study. The campus-wide core curriculum develops proficiency in writing and mathematics, cultivates a breadth of knowledge, promotes critical thinking, allows for the flexibility to meet career goals, and helps develop sensitivity to cultural diversity and international perspectives.

A list of all undergraduate programs, including minors and online programs, is available here (p. 1289).

Everyone is welcome to apply (https://www.ucdenver.edu/international-admissions/). CU Denver values a culture of inclusion and does not discriminate on aspects of identity, including but not limited to gender, race, ethnicity, sexual orientation, ability status, veteran status, nationality, citizenship, religion, and socioeconomic background.

CU Denver seeks to identify applicants who are likely to be successful in a rigorous academic program of study. Admission decisions are based on many factors, the most important being:

- Previous academic performance
- Evidence of academic ability and accomplishment as indicated by scores on national aptitude tests
- Evidence of maturity, motivation, and potential for academic success

CU Denver may deny admission to applicants or readmission to former students whose total credentials indicate an inability to assume obligations of performance and behavior deemed essential by the university.

After completing the application process, official notification of your admission status is provided by International Admissions.

Note: The University of Colorado Denver reserves the right to change the admission decision at any time if additional credentials are received that affect your qualifications.

Application Deadlines

Term	Priority Scholarship Consideration	Deadline if Outside the US	Deadline if Inside the US
Fall 2023	March 1, 2023	July 10, 2023	July 31, 2023
Spring 2024	October 1, 2023	November 24, 2023	January 5, 2024
Summer 2024	N/A	April 26, 2024	May 24, 2024

The university may change document/credential deadlines in accordance with enrollment demands. For the best admission and immigration experience, applicants should apply as early as possible. Admission to the university does not guarantee the availability of desired courses. For an applicant to be considered for a specific term, all documents required for admission must be received by the deadline for that term. Applicants who are unable to meet the deadline may elect to be considered for a later term (see Term Change Requests (p. 43)). Please allow sufficient time to have transcripts sent from previously attended institutions.

Application Processing

Your application will be processed and you will receive a decision within 10 business days of CU Denver receiving a complete application.

First-Year and Transfer Student Admission

CU Denver International Admissions considers a number of factors in determining an applicant's level of academic preparation and success. We interpret the Colorado Department of Higher Education (CDHE) and CU Denver freshman and transfer admission standards in an internally consistent manner, while also taking into account the wide variety of educational backgrounds and experiences international students bring to the university.

Applicants are considered for admission as first-year students if applying to university for the first time after completing their secondary education (comparable to US high school completion) or a relevant high school equivalency exam. Applicants are considered for admission as transfer students if they have completed any amount of post-secondary coursework. In unusual or unique cases, International Admissions may elect to use either the first-year or transfer admission criteria in order to base our admission decision on the best available set of evidence regarding the applicant's likelihood for academic success at CU Denver.

For detailed information about CDHE and CU Denver admission criteria for undergraduate applicants, please see this page (https://www.ucdenver.edu/undergraduate-admissions/).

How to Apply for First-Year Admission

1. Complete and submit your application online via the International Admissions website (https://www.ucdenver.edu/international-admissions/). First-year students may also apply via the Common Application.
2. Pay your $75 non-refundable application fee. **Note:** you can provide a fee waiver code, or request a fee waiver, before submitting your application.
3. Provide the following documents:
   a. Complete transcripts from **all** high schools you have attended - even if you did not graduate from the school.
      i. You may provide official or unofficial transcripts to use for the application and admission process. If you are admitted using unofficial transcripts and enroll at CU Denver, you will be required to provide the official or original document(s) during your first semester of enrollment.
      ii. If your transcript was issued in a language other than English, you must also provide a certified English translation of the transcript. CU Denver does not have a preferred translation provider; we recommend that you use an ATA member company (https://www.atanet.org/). **Note:** You do **not** need to provide an external evaluation of your transcript. International Admissions will evaluate your transcript during the application process. You only need to provide a translation.
   b. High school completion examination scores, as appropriate for your country or situation. Please see this list (https://www.ucdenver.edu/international-admissions/apply-for-

admission/) for documentation requirements from around the world.

c. Proof of English language proficiency (ELP). Please see this page (https://catalog.ucdenver.edu/cu-denver/undergraduate/admissions/international-admissions/proof-english-language-proficiency/) for more information. **Note:** applicants who do not provide proof of ELP, or who do not meet the ELP requirement, will be considered for conditional admission and encouraged to attend CU Denver's ESL Academy (https://clas.ucdenver.edu/esl/) before starting their degree studies.

d. After reviewing your file, International Admissions may determine that we require additional documents. In this case, you must provide all requested documents in order to complete your application.

How to Apply for Transfer Admission

1. Complete and submit your application online via the International Admissions website (https://www.ucdenver.edu/international-admissions/).
2. Pay your $75 non-refundable application fee. **Note:** you can provide a fee waiver code, or request a fee waiver, before submitting your application.
3. Provide the following documents:
   a. Complete transcripts from all colleges, universities, and post-secondary institutions of any kind that you have attended - even if you did not complete a degree at the institution.
      i. You may provide official or unofficial transcripts to use for the application and admission process. If you are admitted using unofficial transcripts and enroll at CU Denver, you will be required to provide the official or original document(s) during your first semester of enrollment.
      ii. If your transcript was issued in a language other than English, you must also provide a certified English translation of the transcript. CU Denver does not have a preferred translation provider; we recommend that you use an ATA member company (https://www.atanet.org/).
      Note: You do **not** need to provide an external evaluation of your transcript. International Admissions will evaluate your transcript during the application process. You only need to provide a translation.
   b. If you have completed less than 24 US semester credits or one year of post-secondary study, you must also provide complete transcripts from all high schools you have attended. Please follow the high school transcript instructions listed under “How to Apply for First-Year Admission” above.
   c. Proof of English language proficiency (ELP). Please see this page (https://catalog.ucdenver.edu/cu-denver/undergraduate/admissions/international-admissions/proof-english-language-proficiency/) for more information. **Note:** applicants who do not provide proof of ELP, or who do not meet the ELP requirement, will be considered for conditional admission and encouraged to attend CU Denver's ESL Academy (https://clas.ucdenver.edu/esl/) before starting their degree studies.
   d. After reviewing your file, International Admissions may determine that we require additional documents. In this case, you must provide all requested documents in order to complete your application.

Non-Degree Admissions

Summer Study at CU Denver

Do you have an I-20 at another US institution, want to take courses during summer break, and bring your credits back to your home institution? If so, non-degree admission is right for you.

Other Non-Degree Study

Do you need an I-20 from University of Colorado Denver or do you want to explore CU Denver before applying to a degree program? Would you like to complete a course for professional development or transfer credits to another institution? If so, non-degree admission is right for you.

If you want to take specific courses requiring pre-requisites, we recommend that you contact the Registrar’s office at registrar@ucdenver.edu before you apply.

*Note that if you already have a bachelor’s degree, you will need to complete the graduate non-degree application. As a graduate non-degree student, you still will have the option to enroll in undergraduate course work.

Certificate/Continuing Professional Programs

Professionals who want to advance their careers or learn a new skill can earn a certificate from CU Denver. Our certificate programs provide specialized information delivered by knowledgeable professors. Additionally, our continuing education classes help you stay current with developments in your field.

*If you want to enroll in courses identified as Continuing and Professional Education (http://www.ucdenver.edu/academics/continuing-education/Pages/), do not apply for non-degree admission. See your program for application information.

Undergraduate Non-Degree Admissions

How to Apply

UndergradUATE Non-Degree Admission Requirements for International Students

- High school diploma *or* 1+ semester of undergraduate study
- Overall GPA of 2.0 or higher
- International non-degree applicants must provide Proof of English Language Proficiency (https://www.ucdenver.edu/international-admissions/apply-for-admission/undergraduate/freshman-admissions/)

*If you are currently attending another US institution or have attended another US institution for at least 1 semester or more, your transcript will act as proof of English language proficiency (ELP). However, you must provide your official US transcript at the time of application.

After Admission

- Immigration Clearance Form is required for all non-degree international applicants

Non-degree coursework requires additional processing steps for the I-20. International Student and Scholar Services (https://www.ucdenver.edu/services/international-student-and-scholar-services/) (ISSS) will help with those requirements.

Proof of English Language Proficiency

International applicants to CU Denver must provide proof of English Language Proficiency (ELP) in order to be considered for full admission. Undergraduate applicants (except Nursing) and some graduate applicants will be considered for conditional admission if they apply without adequate proof of ELP. You may meet the ELP requirement via any of the options listed below. For the most up-to-date information, please visit the International Admissions website (https://www.ucdenver.edu/international-admissions/).

International Admissions will update the English language proficiency policy, effective for admission in the spring 2021 term and forward. Please see below for up-to-date information.

1. Citizenship Exemption

International applicants holding citizenship from the following countries do not need to prove their English language proficiency for admission to CU Denver. This list is based on the United Kingdom government's list of countries (https://www.gov.uk/tier-4-general-visa/knowledge-of-english/) exempt from proving English ability when applying for a UK student visa.

- Antigua & Barbuda
- Australia
- The Bahamas
- Barbados
- Belize
- Canada
- Dominica
- Grenada
- Guyana
- Ireland
- Jamaica
- Malta
- New Zealand
- Saint Kitts & Nevis
- Saint Vincent & the Grenadines
- Trinidad & Tobago
- United Kingdom

2. ESL Academy

International applicants may meet the English language proficiency requirement for any program of study at CU Denver by successfully completing every class in level 5 at CU Denver's ESL Academy (https://clas.ucdenver.edu/esl/).

3. English Language Proficiency Tests

CU Denver accepts the following tests as proof of English language proficiency.

Minimum Score Requirements

Test	TOEFL iBT	IELTS Academic	PTE Academic	Duolingo English Test
Overall Score	79	6.5	58	105
Subscores				
- Reading	18	5.5	42	Literacy: 85
- Listening	17	5.5	42	Conversation: 85
- Speaking	20	5.5	42	Comprehension: 85
- Writing	17	5.5	42	Production: 85

Notes:

- The university minimum scores listed above apply to all undergraduate programs, with the exception of Nursing. Please visit the College of Nursing (https://nursing.cuanschutz.edu/admissions/) website for more information.
- CU Denver's TOEFL code is 4875. For all other tests, please search for or choose "University of Colorado Denver."
- CU Denver accepts TOEFL MyBest scores and superscored IELTS scores.

4. Coursework Completion

International applicants who have completed any of the following coursework will be considered to have met the English language proficiency requirement.

Undergraduate Admission (First-Year and Transfer)

- Earn a high school diploma in the United States, with 1+ year of study in the US and college-prep English coursework
- Earn a high school credential (comparable to a US high school diploma) in any of the exempt countries listed above
- Earn a high school credential (comparable to a US high school diploma) at an exempt country-accredited school located in a non-exempt country
- Earn a high school credential from an English-medium education system which International Admissions recognizes as proof of ELP; see the International Admissions website (https://www.ucdenver.edu/international-admissions/apply-for-admission/undergraduate/) for details

Additional Options for Transfer Admission

- Earn an associate or bachelor degree in the United States
- Earn a post-secondary credential (comparable to a US associate or bachelor degree) in any of the exempt countries listed above
- Earn a post-secondary credential (comparable to a US associate or bachelor degree) at an exempt country-accredited institution located in a non-exempt country
- Complete the GTPathway at a Colorado community college
- Earn 24 or more transferable semester credits at an accredited institution in the US, **and:**
  - Earn an overall college-level GPA of 2.7/4.0 or higher, **or**
  - Earn a final grade of B- or higher in English Composition 1, or equivalent, or a higher English composition course

5. Additional Tests for Undergraduate English Language Proficiency

International applicants to undergraduate programs (except Nursing) may also use the following test scores as proof of ELP. International Admissions must receive the official score report in order to use these tests for ELP.

Test	Required Score
ACT:	
- English	18 or higher
SAT:	
- Evidence-Based Reading and Writing	480 or higher
Advanced Placement (AP):	
- English Literature and Composition	3 or higher
International Baccalaureate (IB):	
- English A Literature (HL or SL)	4 or higher
- English A Language and Literature (HL or SL)	
General Certificate of Education (GCE) A-Level:	
- English Literature	E or higher
- English Language	
General Certificate of Education (GCE) AS-Level:	
- English Language	E or higher

6. LynxDirect Pathway Program

International undergraduate applicants to undergraduate programs who do not meet any of the English Language Proficiency requirements listed above will be considered for admission to the Lynx**Direct** pathway program in the CU Denver ESL Academy. The English Language Proficiency requirement for Lynx**Direct** admission is as follows:

Test/Option	Minimum Required Score (Overall)
TOEFL iBT	70
IELTS Academic	6.0
Duolingo English Test	95
CU Denver ESL Academy	Successful Completion of Level 4

Immigration Process (F-1 & J-1 student visas)

International Services Specialists in International Student & Scholar Services (ISSS) (https://www.ucdenver.edu/services/international-student-and-scholar-services/) handle the immigration process for international students. ISSS will issue an immigration document (Form I-20 or Form DS-2019) to you, if applicable, only after you have accepted your offer of admission and submitted the Immigration Clearance Form (see below). Financial documentation is not required at the time of application.

You will be contacted within five (5) business days of receiving your decision letter and will need to provide:

Proof of Financial Support: If you have already sent financial documents to the International Admissions Office, that information will be forwarded to ISSS. If you have not already provided this information, or if your information needs to be updated, you will have an opportunity to provide ISSS with your proof of financial support when you complete the online Immigration Clearance Form that your International Services Specialist will send to you.

Passport/Visa Information: If you have already sent this information to International Admissions, it will be made available to ISSS who will contact you if they need more information.

Note: International students living outside of the U.S. will need to provide a copy of their passport, if it has not already been sent. Those living in the U.S. should be prepared to submit a copy of their passport, visa, Form I-94 Arrival/Departure Record and Form I-20, Form DS-2019, or Form I-797 (if applicable). In all correspondence, please use your name as it appears on your passport.

Please visit ISSS (https://www.ucdenver.edu/services/international-student-and-scholar-services/) for more information on Pre-Arrival, Arrival at CU Denver, I-20/DS-2019 Timeline, and more.

Admissions Policies

To learn more about Admissions Policies, please review the links below.

- Transcripts (p. 47)
- Supplementary Review (p. 49)
- Bridge to Bachelor's (p. 49)

Transcripts

Official High School Transcripts

Official high school transcripts are required for all degree-seeking undergraduate applicants. Official high school transcripts are those issued by the last institution attended and are accepted via email from a high school official, mail, or electronically through a third party e-transcript exchange agent directly to the Office of Undergraduate Admissions (p. 37). Hand-carried transcripts or transcripts sent directly by an applicant are considered official only if delivered in the original sealed envelope of the issuing institution.

- High school graduates: Three years of completed high school course work is the minimum requirement for an admission decision. An admission decision can be determined before high school graduation; however, if admitted to CU Denver, a final official high school transcript noting a graduation date will be required. If official transcripts are not received by the end of the initial term of attendance, registration for subsequent terms is restricted.
- High school equivalency exam recipients: Students who did not graduate from high school are required to have a copy of their high school equivalency exam test scores and certificate sent directly from the certifying agency to the CU Denver Office of Admissions.

  Note: Applicants who have attended multiple high schools are only required to submit the transcript of the last institution attended provided that the transcript contains all previous high school course work. When requesting a transcript, indicate to the school official that all course work from previous high school/s be included.

Official College Transcripts

Official college transcripts are required for all degree-seeking undergraduate applicants. Official college transcripts are those issued by each institution attended and are accepted via mail or electronically through a third party e-transcript exchange agent and sent directly to the Office of Undergraduate Admissions (p. 37). Hand-carried transcripts or transcripts sent directly by an applicant are considered official only if delivered in the original sealed envelope of the issuing institution.

Individual transcripts are required for each regionally accredited institution attended. Applications are not considered complete until all transcripts from all institutions attended are received.

Note: Transfer credit accepted and documented on another institution's transcript do not fulfill the transcript requirement.

Unofficial Transcripts

CU Denver will accept unofficial high school or college transcripts as a *placeholder* for official transcripts during the application process. These transcripts will allow us to provide an admission decision or a preliminary review of transferability of courses. Transfer credit will not be applied until official transcripts are received. Students will ultimately need to submit official transcripts and may be prevented from registering for courses until official transcripts are received.

Domestic Students with International Transcripts

Non-international applicants that have attended and completed course work at a foreign institution must submit transcripts from those institutions. Transcripts that are not in English must be submitted with a certified English translation. Once received, international transcripts are evaluated by the Office of International Admissions (https://www.ucdenver.edu/international-admissions/).

Note: Evaluations by outside agencies are not accepted or used in an admission decision.

In-Progress Course Work

Applicants who are admitted and enroll at CU Denver with pending completion of in-progress course work are permitted one term to submit final official transcripts. If official transcripts are not received by the end of the initial term of attendance, registration for subsequent terms is restricted. Final transcripts should be sent via mail or electronically through a third party e-transcript exchange agent and sent directly to the Office of Undergraduate Admissions (p. 37). Hand-carried transcripts or transcripts sent directly by an applicant are considered official only if delivered in the original sealed envelope of the issuing institution.

Remedial/Developmental College Course Work

The University of Colorado Denver does not accept remedial/developmental course work as part of an applicant's cumulative GPA and/or credit total. Remedial/developmental courses are intended to bolster the basic skills of new college students so they are adequately prepared for college-level work. Remedial/developmental courses are typically defined as below a 100 course level.

Note: The University of Colorado Denver does not offer remedial/developmental course work.

Grade Replacement

Grade replacement policies vary between institutions and CU Denver defers to each institution's policy when evaluating an applicant's cumulative GPA and credits.

Semester Hours

All college course work is converted into semester hours for purposes of admission evaluation. For example, 1.5 quarter hours is equal to 1 semester hour and 1 trimester hour is equal to 0.75 semester hours.

Required Institution Accreditation

The University of Colorado Denver only considers transcripts from regionally accredited institutions in an admission decision. The following regional accrediting organizations are acceptable:

- Higher Learning Commission
- Accrediting Commission for Community and Junior Colleges
- Middle States Commission on Higher Education and Middle States Commission on Secondary Schools
- New England Commission of Higher Education
- Southern Association of Colleges and Schools Commission on Colleges
- Western Association of Schools and Colleges and WASC Senior College and University Commission
- North Central Association of Colleges and Schools Commission on Colleges
- Northwest Accreditation Commission and North West Commission on Colleges and Universities

To determine regional accreditation of an institution, please visit the Council for Higher Education Accreditation (CHEA) webpage www.chea.org (http://www.chea.org).

Note: The University of Colorado Denver does not recognize accreditation from faith-related or career-related accrediting organizations.

Test-Optional

With the establishment of House Bill HB21-1067, **CU Denver is test-optional and does not require test scores for admission consideration.** It is up to the applicant if they want their test score to be considered in the admission process. Applicants who choose not to submit a test score for admission will be considered the same as students who submit test scores. There is no penalty for not submitting a test score. The following can be considered in making an admission decision without test scores:

- High school grade point average (GPA)
- Number and mix of academic courses
- Rigor of courses such as honors and higher-level math courses
- College-level courses (concurrent enrollment) completed during high school
- AP/IB courses
- Work experiences, such as pre-apprenticeships, job shadowing, and more
- Volunteer experiences
- Leadership experiences
- Campus fit (interest in offered majors, interest in the institution, and more)

Note: AP, IB, and CLEP scores can be submitted to the university for potential transfer credit but do not impact an admission decision.

Document Retention

All credentials submitted as application materials become the property of the University of Colorado Denver. Original documents are not returned or provided to students.

Supplementary Review

Academic Suspension/Probation

Academic Suspension/Probation Review (ASPR) for CU System Students

Transfer/readmit students with a cumulative CU GPA below 2.0 from any University of Colorado campus (Boulder, Colorado Springs or Denver) are subject to additional review by the school or college to which they are applying. Applicants must meet program requirements of the school or college to which they are applying. If requirements are not met, the applicant can be reviewed by the College of Liberal Arts and Sciences for general admission to CU Denver. Applicants should allow additional processing time for this review and contact the school or college advising office for additional information.

Note: Each school and college may also have petition deadlines in place. Due to the time sensitive nature of this process, applicants should contact the school to college advising office as soon as possible.

Applicants who completed high school concurrent courses through any University of Colorado institution and have a GPA below 2.0 are not subject to additional review. However, applicants should be aware that concurrent coursework completed at a University of Colorado institution is counted toward their cumulative CU GPA.

Admission Decision Appeal

Applicants interested in appealing their admission decision should submit a letter to the Office of Undergraduate Admissions with additional information regarding circumstances that may have impeded their academic performance. Additionally, any updated test scores or coursework also should be submitted. Send letters to Admissions@ucdenver.edu and include the subject line "Admission Decision Appeal."

Revoking Admission

Applicants may be denied admission to the university or have their admission revoked if they knowingly:

- Falsify transcripts
- Falsify test scores
- Fail to indicate and provide credentials from all previously attended institutions
- Fail to disclose criminal history or suspension/expulsion information

Criminal History/Suspension

Applicants with criminal history and/or previous suspension expulsion may undergo additional review by the Special Admissions Committee. The Special Admissions Committee meets regularly to review criminal history and suspension/expulsion application information for students who are academically admissible to the university.

Note: Disclosing criminal history or suspension/expulsion information is required but is not grounds for automatic denial of admission.

Appeal process

Applicants may appeal the Special Admissions Committee's decision when new information is available that was not included or available in the initial review of the application file. The information must be provided as part of the appeal. To request an appeal, submit a written letter to the Special Admissions Committee stating the grounds for the appeal and a request to be reconsidered for admission. This letter must be addressed to:

Special Admissions Committee
University of Colorado Denver
Campus Box 167
P.O. Box 173364
Denver, CO 80217-3364

Applicants are notified in writing of the results of the appeal. Should the appeal be denied, applicants may request in writing the appeal be submitted for review to the Dean of Students. In this event, the Special Admissions Committee will inform the Dean of Students and will provide the Dean with the application file, including information relevant to the Special Admissions Committee's decision and the initial appeal. Applicants are notified in writing of the results of the Dean of Students' final admission decision.

Bridge to Bachelor's

The Bridge to Bachelor's program is a partnership between the University of Colorado Denver and select Colorado Community Colleges to provide advising and ongoing support to applicants in pursuit of a four-year degree. Program participants are automatically accepted to the University of Colorado Denver as a junior upon completion of an approved associate's degree from a participating community college:

- Arapahoe Community College (ACC)
- Colorado Northwestern Community College (CNCC)
- Community College of Aurora (CCA)
- Community College of Denver (CCD)
- Front Range Community College (FRCC)
- Lamar Community College (LCC)
- Morgan Community College (MCC)
- Northeastern Junior College (NJC)
- Otero Junior College (OC)
- Pikes Peak Community College (PPCC)
- Pueblo Community College (PCC)
- Red Rocks Community College (RRCC)
- Trinidad State College (TSC)

Student Finances

Contact Information

Bursar's Office

Director of Bursar Services: Jacqui Gatlin
Location: 5th Floor Student Commons Building, 1201 Larimer Street Ste 5123
Customer Service Phone Center: 303-315-1800
E-mail: bursar@ucdenver.edu
Website: https://www.ucdenver.edu/student-finances/billing-payments (https://www.ucdenver.edu/student-finances/billing-payments/)

Financial Aid & Scholarships Office

Director of Financial Aid Services, Denver: Michelle Toro-Dietz
Location: Lynx Central, Commons Building, 1201 Larimer Street
Phone: 303-315-5969
Email: FinancialAid@ucdenver.edu
Website: https://www.ucdenver.edu/student-finances/financial-aid (https://www.ucdenver.edu/student-finances/financial-aid/)

Overview

At CU Denver, we have a longstanding belief that finances should never stand in the way of motivated, talented individuals who want to better themselves and make a positive impact on the world around them. Through a tradition providing strong financial assistance and aid programs, we enforce this belief every day.

Quick Guide

Not sure of the difference between the student finance offices? Here's a quick guide to finding what you need.

Bursar

- Application Fees Payments
- College Opportunity Fund
- Departmental Deposit Transactions
- Tuition and Fee Payments
- Refunds and Direct Deposits
- Student Account Reconciliation
- Third-Party Billing
- Student Balance Outreach
- Past Due Tuition Collection
- Tax Offsets

Financial Aid & Scholarships

It's been said that a college degree is an investment in your future. But for many, financing that investment seems unattainable. That doesn't have to be the case. While the world of financial aid can seem intimidating, if you break it down and put in the work, making financial aid work for you will be the first step toward opening a door to your future.

- How to Apply for Financial Aid
- Types of Aid
- Work-study and Student Employment Opportunities
- Financial Aid Policies
- Scholarships

Financial Aid

How to Apply for Financial Aid

1. Complete the Free Application for Federal Student Aid (FAFSA) at https://www.studentaid.gov (https://www.studentaid.gov/)

CU Denver School Code: 004508

Students who hold a status of ASSET and/or DACA, as well as International and undocumented students may file the CASFA (https://www.ucdenver.edu/student-finances/financial-aid/eligible/asset-daca/) in lieu of the FAFSA

2. Monitor your UCDAccess Portal "To Do List" and UC Denver email for documents to submit

You may receive an email stating that you have been selected for federal verification. This request may include tax documentation.

3. Apply for Scholarships

For more information on scholarships, please visit Scholarships (ucdenver.edu) (https://www.ucdenver.edu/student-finances/scholarships/).

4. Review your Financial Aid Offer

The financial aid offer will detail your aid eligibility.

5. Apply for Federal Student Loans

Log into your UCDAccess Portal to accept, reduce or decline you loan offer.

Types of Aid

Grants

Grants are a type of financial aid award that you don't need to repay. Students must be enrolled at least half-time to receive the grant unless specified.

Federal Grants

- Federal Pell Grant (https://studentaid.gov/understand-aid/types/grants/pell/)
- Federal Supplemental Educational Opportunity Grant (FSEOG) (https://studentaid.gov/understand-aid/types/grants/fseog/)
- Iraq and Afghanistan Service Grant (https://studentaid.gov/understand-aid/types/grants/iraq-afghanistan-service/)
- Children of Fallen Heroes Scholarship (https://www.nasfaa.org/news-item/16809/11-19_Children_of_Fallen_Heroes_Scholarship_Act/)
- Teacher Education Assistance for College and Higher Education (TEACH) Grant (https://studentaid.gov/understand-aid/types/grants/teach/)
  - In order for CU Denver to determine your eligibility for the TEACH Grant, complete the Federal TEACH Grant Interest form located on our forms page under (https://www.ucdenver.edu/student-finances/financial-aid/forms/)*miscellaneous forms*

State

- Colorado Student Grant - Awarded to eligible undergraduate students who are Colorado residents with documented financial need as demonstrated through the FAFSA.

- Colorado Graduate Grant - Awarded to eligible graduate/professional students who are Colorado residents with documented financial need as demonstrated through the FAFSA.

Institutional Grants

- University Need Grant - Awarded to eligible CU Denver undergraduate students with documented financial need as demonstrated through the FAFSA.
- Lynx Grant - Awarded to eligible CU Denver undergraduate students with documented financial need as demonstrated through the FAFSA.

Please note: The Federal Supplemental Education Opportunity Grant, Colorado Graduate Grant, Colorado Student Grant, University Need Grant, and Lynx Grant are offered based on funding availability and are not guaranteed.

Work-Study

Work-study is a financial aid award that allows undergraduate and graduate students to work part-time to earn money to pay for educational expenses. The program encourages community service work and work related to the recipient's course of study. Students earning work-study funds are paid bi-weekly. If awarded work-study, students may search open positions on the Handshake Job Board (https://ucdenver.joinhandshake.com/login/)

Scholarships

Scholarship opportunities are both need-based (documented financial need as demonstrated through the FAFSA) and merit-based.

For more information on scholarships, please visit Scholarships (ucdenver.edu) (https://www.ucdenver.edu/student-finances/scholarships/).

Educational Loans

Educational Loans are funds that have to be repaid.

- Federal Direct Subsidized Loan - The Federal Direct Subsidized Loan is a need-based, federally funded loan. Interest on the Subsidized Loan is paid by the federal government during certain periods. Borrowers receive a six-month grace period before entering repayment. The grace period begins six-months after the student ceases to be enrolled at least half-time, discontinues their program of study or graduates.
- Federal Direct Unsubsidized Loan - The Federal Direct Unsubsidized Loan is a non-need based, federally funded loan. Borrowers receive a six-month grace period before entering repayment. The grace period begins six-months after the student ceases to be enrolled at least half-time, discontinues their program of study or graduates.
- Federal Direct Parent PLUS Loan - The Parent PLUS Loan is a federally funded loan, available to parents of dependent students. The Parent PLUS Loan is credit-based and begins to accrue interest from the date of disbursement. If a parent cannot secure a PLUS Loan due to credit, the undergraduate student may qualify for additional Unsubsidized Loan. Repayment on the PLUS loan begins almost immediately after disbursement, however a parent may make arrangements to have repayment deferred while the student is enrolled at least half-time. The interest on this loan, even while in deferment, will continue to capitalize on the principle amount.
- Private Student Loan- Private student loans are educational loan programs established by private lenders to supplement the funding that students and parents receive from federal and state sources. Private loans are credit based and often have different lending criteria than government lending programs.

Financial Aid Policies and Regulations

Enrollment Status

Most undergraduate financial aid programs require at least half-time enrollment (6 credit hours per semester) to be eligible for awards. Higher or lower minimums may be required for specific individual awards (review your award notification for the exact number of credits required for aid eligibility).

Satisfactory Academic Progress (SAP)

To continue to be eligible for financial aid, students must meet Satisfactory Academic Progress. If a student is not meeting SAP standards, they may be ineligible for financial aid and scholarships. For more information, students should review the Satisfactory Academic Policy by visiting https://www.ucdenver.edu/student-finances/financial-aid/eligible/sap (https://www.ucdenver.edu/student-finances/financial-aid/eligible/sap/).

A student may appeal financial aid suspension by submitting a SAP Appeal. The SAP appeal should document the extenuating circumstances that led to the student's suspension. All appeals should include third party supporting documentation.

Course Withdrawals and Repayments

Financial aid is disbursed based on the assumption a student will attend courses for the entire semester and earn passing grades. A student who withdraws or fails all courses and received financial aid must have a Return of Title IV (R2T4) calculation performed to determine the percentage of aid that was earned based on the amount of time the student attended their courses. Students are entitled to aid that was earned. The University will return any unearned aid to the appropriate Federal Title IV program, which may create a balance owed to the University.

The University will also determine the earned and unearned portions of any state or institutional aid. This calculation is separate from the R2T4 aid calculation.

If you withdraw on or before the University's census date, you will be required to return all state and/or institutional aid received for the term. The Bursar's Office will bill your account for the amount owed.

If you withdraw after the census date, you will be required to repay a portion of any state and institutional received for the term based on your withdrawal date.

CU Denver is required to verify a student began attendance in any course a student withdraws from or fails. If the Financial Aid & Scholarships Office receives notification that a student never began attendance.

For more information regarding financial aid policies and regulations, please visit the CU Denver financial Aid website (https://www.ucdenver.edu/student-finances/financial-aid/policies/).

Tuition and Fees

When a student begins researching higher education institutions, tuition is often the first stop. Undergraduate tuition costs are different for in-state students – students who have Colorado residency – and out-of-state students – those attending CU Denver from outside of Colorado. Tuition and fees are based largely on the classes you take, and which school or college is offering your classes, as well as your resident status. It is important that you understand your residency status (https://www.ucdenver.edu/registrar/residency/) because it impacts more than just tuition rates.

Tuition is the amount a student pays for instruction per course at a college or university. Tuition costs are often listed along with additional fees that all students must pay. These fees cover anything from the student wellness center and other facility maintenance costs to technology upgrades and transportation expenses.

All tuition and fee rates are established by the Board of Regents, the governing body of the University of Colorado, in accordance with legislation enacted annually by the Colorado General Assembly. The Regents set tuition rates and fees at a budget retreat each spring for the coming fall, spring and summer terms, but reserve the right to change rates at any time. Rates for the current year are available online to assist prospective students in anticipating costs. Please refer to the Tuition and Fees (https://www.ucdenver.edu/student-finances/tuition-fees/) site in July for new rates.

College Opportunity Fund (COF)

The College Opportunity Fund (COF), created by the State of Colorado Legislature, provides a stipend to eligible undergraduate students paying in-state tuition. The stipend pays a portion of your total in-state tuition for eligible undergraduate students who attend a public Colorado institution or a participating private institution. Eligible undergraduate students must be admitted and enrolled at a participating institution to use the stipend for eligible undergraduate classes. It isn't considered financial aid and doesn't figure into any financial aid packages offered by the college or university. The stipend pays a portion of your total in-state tuition and is paid directly to your institution on a per-credit-hour basis. This means that you will not receive a check in the amount of the COF, rather, you will see a deduction on your tuition bill.

The stipend is paid to the institution on a per-credit-hour basis, and the credit-hour amount is set annually by the General Assembly. Please check the official state College Opportunity Fund (https://cof.college-assist.org/) website for the current amount. For more information about COF and CU Denver please refer to our website (https://www.ucdenver.edu/registrar/residency/college-opportunity-fund/).

Direct Deposit

Direct deposit is the standard method of issuing student account refunds to CU Denver students with credit balances. Students are strongly encouraged to sign up for direct deposit well in advance of any anticipated student account refunds, and may do so online via the UCDAccess portal (https://passport.ucdenver.edu/login.php).

In your "Student Center", select "Student Account"

1. Go to "Direct Deposit Student Refunds"
2. Follow the instructions and input your banking information.

Students who do not sign up for direct deposit will receive a paper refund check through the mail. Refunds will only be issued via direct deposit or through the mail. **Students are not allowed to pick up their refund check from the Bursar's Office.**

Drop Charge

Beginning the second Tuesday of the fall and spring terms until census date, a $100 drop transaction charge will be assessed each time a student drops a course. Please refer to the academic calendar (https://www.ucdenver.edu/student/calendars/billing/spring/) for exact dates. This includes student initiated drops done in order to change sections within a course. Section changes done for an administrative purpose through the deans' offices will be exempted from drop charges. If a student withdraws, dropping all classes, a drop charge will be assessed for each course.

Past Due Tuition and Fees

Past due student accounts will be assessed a one-time per semester late charge and a monthly service charge for every month the balance remains unpaid. After the semester of the past due debt, student accounts are referred to Student Debt Management. An overdue student account may be referred to a third party collection agency and reported to one or more credit bureau reporting services; the student explicitly authorizes University of Colorado Denver to release personal and financial information under those circumstances. To the extent permitted by applicable law, the student agrees to reimburse the University of Colorado Denver for the fees of any collection agency, which may be based on a percentage at a maximum of 40% of the debt, and all costs and expenses, including reasonable attorney's fees, the University may incur in such collection efforts. In addition, while the student maintains a past due balance with the University of Colorado Denver, a hold will be placed on the student record preventing any future registration, as well as the release of official transcripts and diplomas.

Pursuant to C.R.S. § 23-5-115, in the event of a default on an amount owed to University of Colorado Denver, University of Colorado Denver may certify to the Colorado Department of Revenue information regarding persons with past due accounts. The Colorado Department of Revenue may then disburse funds to University of Colorado Denver in satisfaction of that debt from tax refund amounts owed to the individual, if any.

See the Tuition and Fees Payment Disclosure Statement (https://www.ucdenver.edu/docs/librariesprovider22/billing-payments/tuition-and-fee-agreement.pdf).

Students who owe a past due debt to the university in excess of $1500.00 may be administratively dropped from any future terms if the past due amount is not paid in full or set up on a payment plan. The drop will occur the Friday prior to the first day of classes of the next term. For more information, please see the Bursar's Administrative Withdrawal Policy (https://www.ucdenver.edu/docs/librariesprovider22/billing-payments/administrative-withdrawal-of-students-with-outstanding-debt-policy_procedure-2022_updated.pdf?sfvrsn=975d79bb_2)

Tuition Appeals

Students are responsible for abiding by the published deadlines. Tuition is not refundable when students drop or withdraw from courses after the published deadlines. If circumstances beyond the student's control have made the late drop or withdraw necessary, the student may file a tuition appeal.

Instructions and forms for submitting a tuition appeal are available here (https://www.ucdenver.edu/student-finances/tuition-fees/tuition-appeals/).

Billing and Payments

Please visit our website (https://www.ucdenver.edu/student-finances/billing-payments/) for more information, including state and federal regulations, policies specific to CU Denver (https://www.ucdenver.edu/student-finances/billing-payments/policies/), cost per credit hour, how to make payments, important dates (https://www.ucdenver.edu/student/calendars/billing/spring/), as well as Residency (https://www.ucdenver.edu/registrar/residency/) and the College Opportunity Fund (https://www.ucdenver.edu/registrar/residency/college-opportunity-fund/) (COF) and how they could affect your tuition bill.

Payment of Tuition and Fees

All tuition and fees, except the application fee, are due on the day indicated on your billing statement. Students have an option to choose a payment plan available through QuikPAY, our payment processor. Specific information on the payment plan can be located here (https://www.ucdenver.edu/student-finances/billing-payments/payment-plans/).

Students who register for courses are liable for payment of tuition and fees if they withdraw from school after census date. Refund policies for students who withdraw from the University both before and after census date are included in the academic calendar. A student with financial obligations to the University will not be permitted to register for any subsequent term(s) or be issued transcripts or diplomas. The only exception to this policy involves federal student loans and other types of indebtedness that are due after graduation. More information about registration holds and student debt can be found here (https://www.ucdenver.edu/student-finances/billing-payments/student-debt/).

Students may pay tuition and fees through the UCDAccess portal or with cash, personal checks, by credit card at the Bursar's Office. Any payment transaction that is returned by the bank will be assessed an additional returned payment charge.

The University of Colorado Denver is committed to providing students and their families a range of options for paying their educational expenses. The credit card (including debit card) payment method has become prohibitively expensive due to the fees charged by credit card companies to CU Denver for credit card transaction processing. This expense has been covered by University tuition revenues, and reduces the tuition dollars available for academic programs and services for all students. Therefore, a service fee of 2.85% of the payment amount will be assessed for all credit and debit card transactions.

Students who register in a non-degree status, and who later apply and are admitted to a degree status for that term, are responsible for the difference in tuition between the non-degree program and their applicable degree program and will be billed accordingly.

Tuition Classification

Initial Residency

Initial residency classification for tuition purposes is determined by information submitted on the application for admission. Information regarding residency classification can be found at www.ucdenver.edu/residency (http://www.ucdenver.edu/registrar/residency/future-students/).

Deferred Action for Childhood Arrivals (DACA) and Colorado ASSET

The University of Colorado Denver encourages and provides access for all qualified students. CU Denver accepts and welcomes students under both DACA and ASSET. Diversity is a guiding principle and core value of the university, and CU Denver is committed to maintaining an inclusive environment.

Residency Classification for Tuition Purposes

Tuition classification is governed by Colorado statutes that apply to all state-funded institutions in Colorado. Institutions are bound by the provisions of this statute and are not free to make exceptions to the established rules.

Students are initially classified as in-state or out-of-state for tuition purposes at the time of application. The classification is based upon information furnished by the student and from other relevant sources. After the student's status is determined, it remains unchanged in the absence of satisfactory evidence to the contrary.

Once a student is classified as a nonresident for tuition purposes, the student must petition for a change in classification. Petitions must be submitted **no later than the Monday prior to the first official day of classes** of the term for which the student wishes to be classified as a resident. It is preferred that petitions be received 30 days prior to the beginning of the term. Late petitions will not be considered until the next semester. Specific information may be obtained from the Office of the Registrar.

The final decision regarding tuition status rests with the university. Questions regarding residence (tuition) status should be referred only to the tuition classification officer. Opinions of other persons are not official or binding upon the university. Additional information is available on our website (https://www.ucdenver.edu/registrar/residency/).

Basic Requirements

The statute provides that an in-state student is one who has been a legally domiciled of Colorado for one year or more immediately preceding the beginning of the term for which the in-state classification is being sought. Persons over 23 years of age or who are emancipated establish their own legal domicile. Those who are under 23 years of age and are not emancipated assume the domicile of their parent or court-appointed legal guardian. A non-emancipated minor's parent/legal guardian must, therefore, have a legal domicile in Colorado for one year or more before the minor may be classified as an in-state student for tuition purposes.

Establishing Domicile

Domicile is established when one has a permanent place of habitation in Colorado and the intention of making Colorado one's true, fixed and permanent home and place of habitation. The tuition statute places the burden of establishing a Colorado domicile on the person seeking to establish the domicile. The question of intent is one of documentable fact and needs to be shown by substantial connections with the state sufficient to evidence such intent. Legal domicile in Colorado for tuition purposes begins the day after connections with Colorado are made

sufficient to evidence one's intent. The most common ties with the state are

1. Obtaining a Colorado driver's license/ID,
2. Obtaining of automobile registration in Colorado,
3. Colorado voter registration,
4. permanent employment in Colorado and most important,
5. payment of state income taxes as a resident by one whose income is sufficient to be taxed.

Caution: payment or filing of back taxes in no way serves to establish legal domicile retroactive to the time filed. In order to qualify for in-state tuition for a given term, the 12-month waiting period (which begins when the legal domicile is established) must be over by the first day of classes for the term in question. If one's 12-month waiting period expires during the semester, in-state tuition cannot be granted until the next semester.

Resident Tuition for Military-Connected Students

Military-connected students living in the state of Colorado may be able to receive in-state residency for tuition purposes at CU Denver and CU Anschutz as designated by Federal or State Law. Please review the information on the Veteran and Military Student Services website (https://www.ucdenver.edu/veterans/benefits/) for more information.

Western Undergraduate Exchange (WUE)

Students earning a bachelor's degree can qualify for the WUE tuition rate. The WUE program allows students to pay 150% of the Colorado resident rate. In order to qualify for the WUE program the student must live in one of the qualifying states. A student's WUE status is determined at the time of admission, please click here (https://www.ucdenver.edu/student-finances/tuition-fees/wue/) to obtain more information. If you have any questions please contact the Office of Undergraduate Admissions.

Members of the American Indian Tribes with Historical Ties to Colorado

A student who is a registered member of one of the federally recognized American Indian tribes with historical ties to Colorado, as designated by the Colorado Commission of Indian Affairs in partnerships with History Colorado, is eligible to be classified as an in-state student for tuition purposes. A student can obtain more information by contacting the Office of the Registrar.

Records and Registration

Registrar's Office

Assistant Vice Chancellor and University Registrar: Lara Medley
Office: Student Commons Building, Suite 5005
Telephone: 303-315-5969
Fax: 303-315-2550
E-mail: registrar@ucdenver.edu
Website: www.ucdenver.edu/Registrar (http://www.ucdenver.edu/Registrar/)

Overview

CU Denver offers students a completely online system of planning their schedules and registering for classes. As a student, you are responsible for knowing the deadlines, rules, regulations, course loads, prerequisites and policies of the university, as well as those of the college or school in which you are enrolled, all of which is provided within this online catalog. Please refer to the academic policies section for more specific information related to records and registration.

Students should review the sections of this catalog that describe in detail the academic programs available at CU Denver.

The Registrar's Office will send an e-mail message to the student's university assigned e-mail address, inviting the student to register, including registration information and information on where to locate their registration time assignment. Registration is by time assignment only. Students may register via the web on or after their assigned time.

Services offered include:

- Academic Calendar
- Catalog
- Degree Audit
- Diplomas
- Enrollment Verification
- Grades and Academic Standing
- Name and Record Updates
- Registration including Inter-Campus and Inter-Institutional
- Residency Petition for Continuing Students
- Schedule Adjustment Forms
- Transfer Credit Evaluation
- Transcripts

FERPA

FERPA: Family Educational Rights and Privacy Act

FERPA is a federal privacy law that protects students' educational records. Under this law, students have three primary rights:

- Inspect and review their education records.
- Seek to amend incorrect education records.
- Have some control over the disclosure of information from their education record.

FERPA directory information is information contained in a student's education record that generally would not be considered harmful or an invasion of privacy if disclosed. Under current CU Denver policy, the following information is designated as directory information:

- Student name. If provided, a preferred name will be used when there is not a documented business or legal reason to provide a student's primary name. Students may also select a diploma name for graduation and commencement materials.
- Hometown (city, state).
- Campus email address.[1]
- Dates of attendance.
- Previous educational institutions attended.
- School/college or division of enrollment.
- Majors, minors and field of study.
- Classification level (e.g., first-year, sophomore, graduate student).
- University recognized honors and awards.
- Degree status (e.g. expected graduation date and/or conferral dates/terms).
- Enrollment status.
- Employment related to student status (e.g. teaching assistant, resident assistant or work-study) and dates for positions held.
- Participation in officially recognized activities/sports, including height and weight of athletes.
- Photos and videos taken or maintained by the university.

[1] Campus email addresses are only disclosed to requestors who agree not to use them for solicitation.

Although these items are designated by CU Denver as directory information, only a limited amount of this information is routinely disclosed by CU Denver university officials. The university retains the discretion to refuse disclosure of directory information if it believes such disclosure would be an infringement on student privacy rights.

Students may ask the University not to publicly disclose directory information. Be aware, however, if you are seeking employment, the Registrar's Office cannot release your enrollment, degree status or major to anyone unless you come to the Registrar's Office with a photo ID.

Forms to prevent disclosure of directory information can be obtained at Lynx Central, located in the Student Commons Building, or via the Registrar's Office forms webpage (https://www.ucdenver.edu/registrar/student-resources/forms/).

Information that is never released without your consent includes grades, tuition/fees owed, financial aid, etc. If you would like to give permission to someone else to have access to that information, you can submit a Release of Confidential Information Form to the Office of the Registrar. This form can be submitted in person with a photo ID or if sent via fax, mail, or email it needs to be notarized..

If you have questions regarding your rights under FERPA, please contact the Registrar's Office.

Registration

For more information regarding the registration process, please see below:

- Academic Calendars (p. 56)
- Enrollment Status (p. 66)

- Registration Process (p. 66)
- Special Registrations (p. 69)

Academic Calendars

Consult the official CU Denver academic calendar to determine when registration will open and close for each term. CU Denver academic calendars for upcoming semesters can also be found on the Lynx Central Registration and Planning web page (https://www.ucdenver.edu/student/registration-planning/academic-calendars/).

Fall 2023

Fall 2023 Full Semester

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
First day of Fall semester classes	August 21, 2023
Last day to waitlist Fall classes using UCDAccess	August 27, 2023
Last day to drop a Fall class without a $100 drop charge - All waitlists will be eliminated today.	August 28, 2023
First day instructor approval may be required to add some Fall classes - If unable to enroll in UCDAccess because "Instructor Consent is Required", obtain instructor approval on a Schedule Adjustment Form.	August 28, 2023
Labor Day Holiday - No classes. Campus closed.	September 4, 2023
Census	September 6, 2023
Last Day to add Fall classes in UCDAccess	September 6, 2023
Last day to add Fall classes with instructor consent on the Schedule Adjustment form - If unable to enroll in UCDAccess because "Instructor Consent is Required", obtain instructor approval on a Schedule Adjustment Form.	September 6, 2023
Last day to drop Fall classes with a financial adjustment	September 6, 2023
Fall classes dropped after this date will appear on your transcript with a grade of 'W"	September 6, 2023
Full tuition will be charged for additional Fall classes added after this date - College Opportunity Fund hours will not be deducted from eligible student's lifetime hours.	September 6, 2023
Last day to apply for Fall graduation via UCDAccess - After this date, contact your advisor.	September 6, 2023
Last day to request or cancel Grade Forgiveness for Fall Semester - Refer to the Grade Forgiveness form for restrictions.	September 6, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	October 29, 2023
Last day to withdraw from a Fall class via UCDAccess	October 29, 2023
First day to withdraw from a Fall class with a Late Withdraw Petition form	October 30, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins for Spring Semester via UCDAccess	November 17, 2023
Fall Break - No classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No classes. Campus closed.	November 23, 2023
Last day to withdraw from a Fall class with a Late Withdraw Petition form	December 6, 2023
Fall Finals week	December 11 - 16, 2023
End of Fall semester - Commencement	December 16, 2023
Final Fall Semester grades available on UCDAccess and transcripts (tentative)	December 21, 2023
Winter Break - No classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024

Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Fall 2023 First Five-Week Session

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
First day of Fall first five-week session	August 21, 2023
Last day to add or waitlist Fall first five-week session classes using UCDAccess	August 25, 2023
Last day to drop a Fall first five-week session class without a penalty and a 'W' grade	August 25, 2023
Labor Day Holiday - No Classes. Campus closed.	September 4, 2023
Last day to withdraw from a Fall first five-week session class via UCDAccess	September 9, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	September 9, 2023
End of Fall first five-week session	September 23, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins for Spring Semester via UCDAccess	November 17, 2023
Fall Break - No classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No classes. Campus closed.	November 23, 2023
Winter Break - No classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024
Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Fall 2023 Second Five-Week Session

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
Labor Day Holiday - No classes. Campus closed.	September 4, 2023
Last day to apply for Fall graduation via UCDAccess - After this date, contact your advisor.	September 6, 2023
First day of Fall second five-week session	September 25, 2023
Last day to add or waitlist Fall second five-week session classes using UCDAccess	September 29, 2023
Last day to drop a Fall second five-week session class without a penalty and a 'W' grade	September 29, 2023
Last day to withdraw from a Fall second five-week session class via UCDAccess	October 14, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	October 14, 2023
End of Fall second five-week session	October 28, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins for Spring Semester via UCDAccess	November 17, 2023
Fall Break - No classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No classes. Campus closed.	November 23, 2023
Winter Break - No classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024

Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Fall 2023 Third Five-Week Session

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
Labor Day Holiday - No classes. Campus closed.	September 4, 2023
Last day to apply for Fall graduation via UCDAccess - After this date, contact your advisor.	September 6, 2023
First day of Fall third five-week session	October 30, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Last day to add or waitlist Fall third five-week session classes using UCDAccess	November 3, 2023
Last day to drop a Fall third five-week session class without a penalty and a 'W' grade	November 3, 2023
Open enrollment begins for Spring Semester via UCDAccess	November 17, 2023
Last day to withdraw from a Fall third five-week session class via UCDAccess	November 18, 2023
Fall Break - No classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No classes. Campus closed.	November 23, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	November 18, 2023
End of Fall third five-week session	December 16, 2023
Winter Break - No Classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024
Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Fall 2023 First Eight-Week Session

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
First day of Fall first eight-week session	August 21, 2023
Last day to add or waitlist Fall first eight-week session classes using UCDAccess	August 28, 2023
Last day to drop a Fall first eight-week session class without a penalty and a 'W' grade	August 28, 2023
Labor Day Holiday - No classes. Campus closed.	September 4, 2023
Last day to withdraw from a Fall first eight-week session class via UCDAccess	September 21, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	September 21, 2023
End of Fall first eight-week session	October 14, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins for Spring Semester via UCDAccess	November 17, 2023
Fall Break - No classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No classes. Campus closed.	November 23, 2023
Winter Break - No classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024

Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Fall 2023 Second Eight-Week Session

Event	Date
First day to apply for Fall Graduation via UCDAccess	April 3, 2023
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 3-18, 2023
Open enrollment begins for Fall Semester via UCDAccess	April 19, 2023
Labor Day Holiday - No classes. Campus closed.	September 4, 2023
Last day to apply for Fall graduation via UCDAccess - After this date, contact your advisor.	September 6, 2023
First day of Fall second eight-week session	October 16, 2023
Last day to add or waitlist Fall second eight-week session classes using UCDAccess	October 23, 2023
Last day to drop a Fall second eight-week session class without a penalty and a 'W' grade	October 23, 2023
Last day to withdraw from a Fall second eight-week session class via UCDAccess	November 16, 2023
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	November 16, 2023
Fall Break - No Classes. Campus open.	November 20 - 26, 2023
Thanksgiving Day - No Classes. Campus closed.	November 23, 2023
End of Fall second eight-week session	December 16, 2023
Winter Break - No Classes. Campus closed.	Dec. 25, 2023 - Jan. 1, 2024
Fall degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on January 1st.	January 12, 2024

Spring 2024

Spring 2024 Full Semester (Main Session)

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
First day of Spring semester classes	January 16, 2024
Last day to waitlist classes using UCDAccess	January 21, 2024
Last day to drop a class without a $100 drop charge - All waitlists will be eliminated today.	January 22, 2024
First day instructor approval may be required to add some classes - If unable to enroll in UCDAccess because "Instructor Consent is Required", obtain instructor approval on a Schedule Adjustment Form.	January 22, 2024
Census	January 31, 2024
Last Day to add classes in UCDAccess	January 31, 2024
Last day to add classes with instructor consent on the Schedule Adjustment form - If unable to enroll in UCDAccess because "Instructor Consent is Required", obtain instructor approval on a Schedule Adjustment Form.	January 31, 2024
Last day to drop classes with a financial adjustment	January 31, 2024
Classes dropped after this date will appear on your transcript with a grade of 'W"	January 31, 2024
Full tuition will be charged for additional classes added after this date - College Opportunity Fund hours will not be deducted from eligible student's lifetime hours.	January 31, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
Last day to request or cancel Grade Forgiveness - Refer to the Grade Forgiveness form for restrictions.	January 31, 2024

Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024
Open enrollment begins for Summer Semester	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
Last day to withdraw from a class via UCDAccess	March 31, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	March 31, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
First day to withdraw from a class with a Late Withdraw Petition form	April 1, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Last day to withdraw from a class with a Late Withdraw Petition form	May 1, 2024
Finals week	May 6, 2024 - May 11, 2024
End of semester - Commencement	May 11, 2024
Final grades available on UCDAccess and transcripts (tentative)	May 16, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Spring 2024 First-Five Week Session

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
First day of first five-week session	January 16, 2024
Last day to waitlist first five-week session classes using UCDAccess	January 20, 2024
Last day to add first five-week session classes using UCDAccess	January 20, 2024
Last day to drop a first five-week session class without a penalty and a 'W' grade	January 20, 2024
First five-week session waitlists purged today	January 21, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
Last day to withdraw from a first five-week session class via UCDAccess.	February 4, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	February 4, 2024
End of first five-week session	February 17, 2024
Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024
Open enrollment begins for Summer Semester	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024

Open enrollment begins for Summer Semester	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Spring 2024 Second-Five Week Session

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
First day of second five-week session	February 19, 2024
Last day to waitlist second five-week session classes using UCDAccess	February 23, 2024
Last day to add first second-week session classes using UCDAccess	February 23, 2024
Last day to drop a second five-week session class without a penalty and a 'W' grade	February 23, 2024
Second five-week session waitlists purged today	February 24, 2024
Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024
Last day to withdraw from a second five-week session class via UCDAccess	March 9, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	March 9, 2024
Open enrollment begins for Summer Semester	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
End of second five-week session	March 23, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Spring 2024 Third-Five Week Session

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024
Open enrollment begins for Summer Semester	March 19, 2024

Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
First day of third five-week session	April 1, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Last day to waitlist third five-week session classes using UCDAccess	April 5, 2024
Last day to add third five-week session classes using UCDAccess	April 5, 2024
Last day to drop a third five-week session class without a penalty and a 'W' grade	April 5, 2024
Third five-week session waitlists purged today	April 6, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Last day to withdraw from a third five-week session class via UCDAccess	April 20, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	April 20, 2024
End of third five-week session	May 4, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Spring 2024 First-Eight Week Session

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
First day of first eight-week session	January 16, 2024
Last day to waitlist for eight-week session classes using UCDAccess	January 23, 2024
Last day to add eight-week session classes using UCDAccess	January 23, 2024
Last day to drop a first eight-week session class without a penalty and a 'W' grade	January 23, 2024
First eight-week session waitlists purged today	January 24, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
Last day to withdraw from a first eight-week session class via UCDAccess	February 16, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	February 16, 2024
First day to withdraw from a class with a Late Withdraw Petition form	February 17, 2024
Last day to withdraw from a class with a Late Withdraw Petition form	February 28, 2024
Registration begins for Summer Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1, 2024 - March 18, 2024
End of first eight-week session	March 9, 2024
Open enrollment begins for Summer Semester	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Spring 2024 Second Eight Week Session

Event	Date
First day to apply for Spring Graduation via UCDAccess	November 1, 2023
Registration begins for Spring Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	Nov. 1, 2023 - Nov. 16, 2023
Open enrollment begins	November 17, 2023
Martin Luther King Jr. Holiday - No classes. Campus open.	January 15, 2024
Last day to apply for Spring graduation via UCDAccess - After this date, contact your advisor.	January 31, 2024
First day of second eight-week session	March 11, 2024
Last day to waitlist for eight-week session classes using UCDAccess	March 18, 2024
Last day to add eight-week session classes using UCDAccess	March 18, 2024
Last day to drop a second eight-week session class without a penalty and a 'W' grade	March 18, 2024
Second eight-week session waitlists purged today	March 19, 2024
Spring Break - No classes. Campus open.	March 18, 2024 - March 24, 2024
Registration begins for Fall Semester via UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Last day to withdraw from a second eight-week session class via UCDAccess	April 18, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	April 18, 2024
Spring degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on July 5th.	June 18, 2024

Summer 2024

Summer 2024 Full Session (Main Session)

Event	Date
First day to apply for Summer Graduation in UCDAccess	March 1, 2024
Registration begins for Summer in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1 - 18, 2024
Open enrollment begins for Summer in UCDAccess	March 19, 2024
Registration begins for Fall Semester in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Memorial Day - No classes. Campus closed.	May 27, 2024
First day of Summer semester classes	June 3, 2024
Last day to waitlist classes using UCDAccess	June 6, 2024
Last day to drop a class without a $100 drop charge - All waitlists will be eliminated today.	June 7, 2024
Census	June 11, 2024
Last Day to add classes in UCDAccess	June 11, 2024
Last day to drop classes with a financial adjustment	June 11, 2024
Classes dropped after this date will appear on your transcript with a grade of 'W"	June 11, 2024
Full tuition will be charged for additional classes added after this date - College Opportunity Fund hours will not be deducted from eligible student's lifetime hours.	June 11, 2024
Last day to apply for Summer graduation in UCDAccess - After this date, contact your advisor.	June 11, 2024
Last day to request or cancel Grade Forgiveness - Refer to the Grade Forgiveness form for restrictions.	June 11, 2024

Independence Day - No classes. Campus closed.	July 4, 2024
Last day to withdraw from a class in UCDAccess	July 7, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	July 7, 2024
First day to withdraw from a class with a Late Withdraw Petition form	July 8, 2024
Last day to withdraw from a class with a Late Withdraw Petition form	July 17, 2024
End of semester	July 27, 2024
Final grades available on UCDAccess and transcripts (tentative)	August 1, 2024
Summer degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on September 5th.	August 19, 2024

Maymester 2024

Event	Date
First day to apply for Summer Graduation in UCDAccess	March 1, 2024
Registration begins for Summer in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1 - 18, 2024
Open enrollment begins for Summer in UCDAccess	March 19, 2024
Registration begins for Fall Semester in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
First day of Maymester classes	May 13, 2024
Last day to add and waitlist Maymester classes using UCDAccess	May 14, 2024
Last day to drop Maymester classes with a financial adjustment	May 14, 2024
Maymester classes dropped after this date will appear on your transcript with a grade of 'W"	May 14, 2024
Full tuition will be charged for additional Maymester classes added after this date - College Opportunity Fund hours will not be deducted from eligible student's lifetime hours.	May 14, 2024
Maymester waitlists purged - All waitlists will be eliminated today.	May 15, 2024
Last day to withdraw from a Maymester class in UCDAccess	May 23, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	May 23, 2024
Memorial Day - No classes. Campus closed.	May 27, 2024
End of Maymester	May 30, 2024
Last day to apply for Summer graduation in UCDAccess - After this date, contact your advisor.	June 11, 2024
Independence Day - No classes. Campus closed.	July 4, 2024
Summer degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on September 5th.	August 19, 2024

Summer 2024 First-Four Week Session

Event	Date
First day to apply for Summer Graduation in UCDAccess	March 1, 2024
Registration begins for Summer in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1 - 18, 2024
Open enrollment begins for Summer in UCDAccess	March 19, 2024
Registration begins for Fall Semester in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024

Open enrollment begins for Fall Semester	April 17, 2024
Memorial Day - No classes. Campus closed.	May 27, 2024
First day of first four-week session	June 3, 2024
Last day to waitlist classes using UCDAccess	June 6, 2024
Last day to add first four-week session classes using UCDAccess	June 6, 2024
Last day to drop a first four-week session class without a penalty and a 'W' grade	June 6, 2024
Last day to withdraw from a first four-week session class in UCDAccess	June 18, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	June 18, 2024
End of first four-week session	June 29, 2024
Independence Day - No classes. Campus closed.	July 4, 2024
Summer degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on September 5th.	August 19, 2024

Summer 2024 Second-Four Week Session

Event	Date
First day to apply for Summer Graduation in UCDAccess	March 1, 2024
Registration begins for Summer in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	March 1 - 18, 2024
Open enrollment begins for Summer in UCDAccess	March 19, 2024
Registration begins for Fall Semester in UCDAccess - Check UCDAccess for your specific registration date and time assignment. For best course selection, register as soon as possible after your registration time assignment.	April 1, 2024 - April 16, 2024
Open enrollment begins for Fall Semester	April 17, 2024
Memorial Day - No classes. Campus closed.	May 27, 2024
First day of second four-week session	July 1, 2024
Independence Day - No classes. Campus closed.	July 4, 2024
Last day to waitlist classes using UCDAccess	July 5, 2024
Last day to add four-week session classes using UCDAccess	July 5, 2024
Last day to drop a second four-week session class without a penalty and a 'W' grade	July 5, 2024
Last day to withdraw from a second four-week session class in UCDAccess	July 17, 2024
Last day to request No Credit or P+/P/F grade for a class. Graduate degree students can exercise the P+/P/F option for undergraduate courses only. Graduate students should consult their school or college regarding the P+/P/F option. A grade of P+/P/S will not be acceptable for graduate credit to satisfy any graduate education requirement.	July 17, 2024
End of second four-week session	July 27, 2024
Summer degrees posted on UCDAccess and transcripts (tentative) - This is the date your degree will be recorded on your transcript; diplomas begin mailing on September 5th.	August 19, 2024

Non-standard and Intensive Courses

Courses can be offered at a shortened, accelerated pace, in which the credit hours assigned are the same as standard semester courses. These courses require the same total amount of instructional and student work time as full semester courses, even if delivered within an accelerated time frame. Drop deadlines are unique to each course and can be viewed in UCDAccess in "My Class Schedule" under "Deadlines".

Enrollment Status

Individual students receiving financial aid may be required to complete credits in addition to those listed below. The exact requirements for financial aid will be listed in the student's financial aid award letter.

Undergraduates and Non-degree Undergraduate students:

- Full-time
  - 12 or more credit hours
- Half-time
  - 6 to 11.5 credit hours

Graduate and Non-degree Graduate students:

- Full-time
  - 5 or more credit hours
  - 0 credit hours as a candidate for degree
  - 1 or more credit hours of thesis or dissertation (not master's reports or thesis preparation)
- Half-time
  - 3 to 4.5 credit hours

Notes:

Enrollment verification of full-time/part-time attendance can be certified beginning the first day of class.

Credits used for calculating full-time/part-time enrollment status do not include inter-institutional credits, nor do they include credits from another CU campus, unless the student is enrolled through the Intercampus Enrollment (http://catalog.ucdenver.edu/cu-denver/graduate/records-registration/registration/special-registrations/#intercampusenrollmenttext) Program.

Students receiving veteran benefits should contact the Veteran Student Services manager for the definition of full-time status for summer sessions. Contact information: 303-315-7300 or VMSS@ucdenver.edu.

Individual exceptions to the minimum graduate course-load levels are considered for financial aid purposes by the financial aid committee. Students must file a written appeal with the Office of Financial Aid (p. 50).

Course Load/Restrictions

In most cases, students wishing to take more than 18 semester hours (12 in the summer session) must have the overload approved by the Academic Advising Office of their college or school. Students should consult with their Academic Advisor for specific guidelines as to course-load restrictions.

Student Classification

Students are classified according to the number of semester hours completed:

Classification	Hours
Freshman	0-29 hours
Sophomore	30-59 hours
Junior	60-89 hours
Senior	90+ hours

All transfer students will be classified on the same basis according to their hours of credit accepted by the University of Colorado.

Registration Process

CU Denver students can register and obtain information regarding their academic and financial records by logging into their **UCD Access portal**.

Online registration allows the student to check the availability of specific courses prior to their registration time and to search for available courses by department, course level or meeting time. If registration in a course is denied, the reason will be specified in UCD Access.

Enrollment Appointment

An enrollment appointment is a specific time and date at which a student can register for classes through UCDAccess. This enrollment appointment is assigned to a student the semester prior to the term of registration. Students cannot enroll for classes prior to the date and time specified. Enrollment appointment dates are based on the number of academic hours completed. Enrollment appointment times are randomly assigned in fifteen minute timeslots. Students can check the UCDAccess student portal for their specific enrollment appointment date and time. The general progression of registration will start with graduate students, 5th-year seniors, seniors, juniors, sophomore, freshman, and non-degree students. Students who register as soon as their enrollment appointment begins are more likely to find space in the courses they prefer.

Course Load/Restriction

In most cases, students wishing to take more than 18 semester hours (12 in the summer session) must have the overload approved by the dean of their college or school. Consult the individual college or school for specific guidelines as to course-load restrictions.

School/College Specific Policy

College of Engineering, Design & Computing (p. 296)

Web Registration and Student Information

Denver Campus students can register and obtain information regarding their academic and financial records by logging into their **UCD Access portal**.

Online registration allows the student to check the availability of specific courses prior to their registration time and to search for available courses by department, course level, or meeting time. If registration in a course is denied, the reason will be specified in UCD Access.

Student information available online currently includes mailing address verification (or change), admission application status, financial aid information, schedule by semester, grades by semester, unofficial transcript, account balance, online payment and degree audit (for some programs).

Adding a Course

From your registration time assignment to the published add deadline, you are able to add classes through UCDAccess portal. If a class is closed/full, you can add your name to the waitlist (if available) through this date. Click here (https://catalog.ucdenver.edu/cu-denver/

undergraduate/records-registration/registration/waitlist/) for more information regarding Waitlists.

To add a class after the published add deadline date to census date, you may need to obtain the instructor's permission by completing the Schedule Adjustment Form found here (https://www.ucdenver.edu/registrar/student-resources/forms/).

School/College Specific Policy

BUSINESS SCHOOL (p. 134)
COLLEGE OF ARTS & MEDIA (p. 211)

Course Credit Limitations by School/College

School/College Specific Policy

BUSINESS SCHOOL (p. 134)
COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

Adding a Course After Census

To add a class after census, a Schedule Adjustment Form with both the instructor's and authority's signatures needs to be submitted to the Registrar's Office. These deadlines vary for intensive, module, and off-cycle classes.

School/College Specific Policy

COLLEGE OF ARTS & MEDIA (p. 211)

Administrative Add Policy

School/College Specific Policy

COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

Administrative Switch Policy

School/College Specific Policy

COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

Withdraw Processes

From census until the 10th week of classes, a student may withdraw from most courses using the UCDAccess portal.

Students may be financially responsible for part or all tuition and fees for any class drops or withdrawals. Class drops or withdrawals may lead to adjustments to financial aid/awards packages, Department of Veteran Affairs education benefits, or other eligibility/benefits that are dependent upon enrollment status. Class drops or withdrawals may impact immigration status for international students. A W grade appears on the transcript after published deadlines. Contact the Registrar's Office with questions about class drops or withdrawals.

Please review the current term's academic calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/) for the most recent add/drop deadlines.

School/College Specific Policy

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 296)

Administrative Drop

An administrative drop is processed by university officials in the Registrar's Office by approval of a school/college dean's office. A student may be administratively dropped from one or more classes or withdrawn from all classes for any of the following reasons:

- failure to meet certain preconditions, including but not limited to:
  - class cancellations
  - failure to meet course prerequisites
- whenever the safety of the student, faculty member or other students in a course would be jeopardized
- academic suspension, including but not limited to failure to attain or maintain a required GPA
- as a potential sanction for a violation of the code of student conduct
- disruptive behavior determined by the chair and/or associate dean or Office of Student Conduct and Community Standards to be detrimental to the progress of the course and the education of other students

School/College Specific Policy

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COLLEGE OF ARTS & MEDIA (p. 211)
COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

Outstanding Debt/Administrative Drop Policy

Students who owe a past due debt to the university in excess of $1500 will be administratively dropped from any future terms if past due amount is not paid in full before the Friday prior to the first day of classes of the next term.

Retroactive Drop/Withdrawal

School/College Specific Policy

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COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 296)
COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

To Withdraw from CU Denver

To withdraw from the University of Colorado Denver, students must drop all courses for the semester. Prior to census (see current academic calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/) for census date), students must use the web registration system to drop courses. Courses dropped during this period are not recorded on the student's permanent record.

After the census date (see current academic calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/) for census date), through the 10th week (fourth week for summer) students may withdraw from their courses using the UCDAccess Portal. Courses dropped during this period will be recorded on the student's permanent record with a grade of W.

Courses dropped during this period will be recorded on the student's permanent record with a grade ofW.Students seeking to withdraw after the 10th week (fourth week for summer) must complete a petition through the associate dean of their school/college. school or college.

A student who stops attending classes without officially withdrawing from the university will receive grades of F for all course work during that term.

Medical Withdrawal

A student who wishes to withdraw under the Medical Withdrawal Policy must withdraw from all classes. Additionally, international students must contact their assigned International Services Specialist to discuss visa

implications associated with withdrawing. Students seeking to withdraw for non-medical reasons will need to review the withdrawal policies and procedures for their respective school or college. For more information, see The Office of Case Management (https://www.ucdenver.edu/student/health-wellness/case-management/).

Waitlist

If you are eligible to take a class but find that it is closed/full, you may request to be placed on a waitlist (if available) through the UCDAccess portal. Placing your name on a waitlist does not guarantee that you will be enrolled in that class. However, waitlists have proven to be a very effective tool for students wishing to register in closed classes.

You cannot be enrolled in, and/or waitlisted, for classes offered at the same time. You cannot be enrolled/waitlisted for two sections of the same class (except in the case of Special Topics classes). Use the 'drop this class if enrolled' function in the UCDAccess portal to maximize your enrollment choices.

Monitor your status on the waitlist; you will be enrolled in the class if space becomes available. You may attend all classes until you confirm whether or not you are officially enrolled in the class. You will receive an email if you get enrolled into the class. You are responsible for the tuition if you become enrolled from the waitlist, even if you do not attend. If you do not wish to take the class, you are responsible for dropping it according to the published deadlines in the Academic Calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/).

Waitlist Positions and Enrollment

When someone drops a closed class, the student who is next in line on the waitlist is automatically enrolled. Schools and colleges reserve the right to make exceptions to manage their waitlists based on unique needs and circumstances. Please check your class schedule in the UCDAccess portal to see if you have been enrolled in the class(es).

CU Online-Waitlisted Courses

You will have access to an online class while you are on the waitlist. While you are waiting for confirmation or denial of enrollment, you may participate in a waitlisted online class. After the first week of class, if you have not been automatically enrolled into the class, you will be dropped. If you want to be added to a closed class, you must obtain permission from the instructor. Contact CU Online (https://online.cu.edu/student-support/) for assistance in contacting the instructor.

Dropping Waitlisted Courses

If you choose not to remain on a waitlist, drop the class as soon as possible. Or if you find that you have been enrolled in a class that you no longer want, drop the class as soon as possible.

Registration for Non-Degree Seeking Students

Students who have been matriculated as main campus, non-degree are eligible to enroll in classes that are offered as part of a degree program or as part of extended studies. Main campus, non-degree seeking students can register during open enrollment, which begins after enrollment periods for degree-seeking students.

Students who have been matriculated as continuing and professional education are only eligible to enroll in extended studies classes. Enrollment periods for these courses vary because not all of them meet in accordance with the regular semester. Students should check with the school or department offering the extended studies course or program for add and drop deadlines, course details, and eligibility.

School/College Specific Policy

COLLEGE OF ENGINEERING, DESIGN & COMPUTING (p. 296)

Holds

A hold is a service indicator that may prevent registering for classes and receiving an official transcript and/or diploma. A hold can be placed on a student's record for a variety of reasons that may include financial, health, academic standing, required documentation, and advising. Students can view holds in UCDAccess. These holds should be resolved in a timely manner. Students should contact the appropriate department identified in the hold details to get these holds addressed.

School/College Specific Policy

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COLLEGE OF ARTS & MEDIA (p. 211)

Intra-University Transfer (IUT)

Degree seeking students on the Denver Campus may change colleges or schools within the university provided they are accepted by the college or school to which they wish to transfer. Intra-university transfer forms may be obtained from the student's school or college or from the Office of the Registrar. Decisions on intra-university transfers are made by the college or school to which the student wishes to transfer.

Transfer deadlines for all programs are August 1 for Fall semester, December 1 for Spring semester, and May 1 for Summer semester sessions.

Students in continuing and professional studies programs wishing to enroll in regular courses or degree programs at CU Denver and undergraduate students wishing to become graduate students (or vice versa) should apply for admission to CU Denver. Visit www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/) or contact the Office of Admissions at 303-315-2601 or admissions@ucdenver.edu for assistance with application processes and options.

School/College Specific Policy

BUSINESS SCHOOL

Students who want to transfer to the Business School from another college or school of the University of Colorado Denver must formally apply for an intra-university transfer (IUT) to the Business School. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form and transcripts from the University of Colorado to the business program coordinator. Intra-university transfer forms are available from the Office of the Registrar or the Business School Advising Office. Transcripts (https://www.ucdenver.edu/registrar/student-resources/transcripts/) can be ordered via the Office of the Registrar. The transcript must include the student's most recent semester at the university. Students with previous course work from other institutions are also required to submit a copy of their transfer credit evaluations (advanced standings).

COLLEGE OF ARCHITECTURE AND PLANNING

Students who want to transfer to the BS Architecture program from another college or school of the University of Colorado Denver must formally apply to the College. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form to the College of Architecture and Planning undergraduate advisor. Intra-university transfer forms are available at the Office of Registrar or

the College of Architecture and Planning Undergraduate Advising Office. Transcripts (https://www.ucdenver.edu/registrar/student-resources/transcripts/) can be ordered via the Office of the Registrar. Transfer deadlines are August 1 for fall semester, December 1 for spring semester and May 1 for the summer session. Students must have earned a minimum of 12 University of Colorado Denver semester hours and have a 2.300 cumulative University of Colorado GPA to be eligible for an IUT to the BS Architecture program.

COLLEGE OF ARTS & MEDIA

Students who want to transfer to the College of Arts & Media (CAM) from another college or school within the university must formally apply for an intra-university transfer (IUT) and pass any appropriate reviews/assessments as outlined in the program pages of this catalog. To be considered for admission, students must have a minimum 2.000 cumulative University of Colorado GPA. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form to the College of Arts & Media undergraduate advisor. Intra-university transfer forms are available at the Office of Registrar or from a CAM advisor. Transcripts (https://www.ucdenver.edu/registrar/student-resources/transcripts/) can be ordered via the Office of the Registrar.

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING

CU Denver students interested in an undergraduate engineering program but not enrolled in the college must request an intra-university transfer (IUT). Those approved for an IUT will be admitted into the engineering program. Students who are not directly admitted to their program will be automatically considered for pre-engineering. Admission to Pre-Engineering does not guarantee admission to the major.

- a 2.750 (or higher) cumulative CU Denver GPA
- a 2.500 (or higher) GPA in Calculus I, Calculus II, and Calculus-based Physics I and the corresponding lab and no lower than a C- in any one of these courses.
- IUT guidelines are subject to change. Students are encouraged to meet with an engineering advisor to discuss the IUT process prior to submitting a request.

SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT

Students who wish to transfer to the SEHD from another school/college must meet with an academic advisor and formally apply for an intra-university transfer (IUT). Students must have a minimum of 2.000 cumulative University of Colorado GPA to be eligible for an IUT to the SEHD. Students should also be aware that, for teacher education licensure tracks, a minimum of a 3.000 cumulative University of Colorado GPA is required for admission to their final year, the Professional Year (students with a lower GPA may be considered under certain conditions; please see SEHD website).

SCHOOL OF PUBLIC AFFAIRS

Students who want to transfer to the School of Public Affairs from another college or school of the University of Colorado Denver must formally apply for an intra-university transfer (IUT) to the School of Public Affairs Advising Office (spa.advising@ucdenver.edu). To apply for an IUT, students must submit an IUT form to the School of Public Affairs Advising Office. IUT forms are available from the Office of the Registrar or from an academic advisor.

Special Registrations

Auditing

To qualify as an auditor for fall, spring or summer semester, a student must be 21 years of age or older or approved by the Registrar's Office. Auditors may not be registered for any other University of Colorado courses during the time they are auditing. Auditors are not eligible to audit courses if they are under suspension from the university or have outstanding financial obligations to the university.

The Registrar's Office does not keep any record of courses audited; therefore, credit for these courses cannot be established. Auditors may attend as many courses as they wish (except those courses with laboratories or where special equipment is used), provided they have received permission from each instructor.

An auditor's card is issued by the Bursar's Office after classes begin. An auditor's card is non-refundable. Auditors, whether resident or nonresident, pay for three semester hours of resident tuition for all audited courses during the fall, spring and or summer semester for class instruction and library privileges only. Auditors do not receive student parking privileges and are not eligible for other student services. This card should be presented to the instructor upon entering the class. For more information, contact the Bursar's Office (p. 50).

Intercampus Enrollment

The Intercampus Enrollment Program is open to all CU Denver degree seeking students who are currently enrolled in CU Denver courses. This program helps students fulfill degree requirements so that they may graduate in a timely manner. Students who wish to utilize this program and enroll in courses at the Boulder or Colorado Springs campus concurrently, must meet with their Academic Advisor from their School/College at the Home (Denver) Campus to confirm that the course taken at a Host Campus is equivalent to the course needed to graduate, and to ensure that all required prerequisites/requisites are fulfilled.

Actively-enrolled CU Denver degree seeking students may be eligible for enrollment in up to two (2) courses **or** six (6) credit hours, whichever is greater, at another CU campus, by submitting the Intercampus Enrollment and Policy Form to the Registrar's Office prior to the Add Deadline date of the Host Campus (Boulder/Colorado Springs). The Intercampus Enrollment and Policy Form can be obtained by accessing the CU Denver Registrar's Office website (https://www.ucdenver.edu/registrar/student-resources/forms/).

If you are a student using VA Education benefits Chapter 33 (Post 9/11 GI Bill), you should **NOT use the Intercampus Enrollment Program** if you want your enrollments at a sister campus covered. **Contact your VMSS Certifying Official to go over your options.**

If you are a student using VA Education benefits Chapters 30, 31, 35 and Chapter 1606, you are **ELIGIBLE to use the Intercampus Program** and your courses will be covered under the Intercampus Enrollment Program billing policy.

Students who wish to utilize this program must meet the following requirements for eligibility:

- Must be currently enrolled in at least one (1) course at their home campus during the term in which they are seeking enrollment at CU Boulder/CU Colorado Springs.

- Students must have their Academic Advisor confirm that all requisites have been met by the student prior to enrollment in the requested Intercampus course(s).
- Courses requested through the Intercampus Enrollment Program must be Main Campus courses. Continuing Education and Coursera courses are **not** eligible under any circumstance.
- Some Undergraduate & Graduate Students may be exempt from Home campus enrollment if seeking a degree in the following programs at the campus listed:
  - Applied Mathematics (PhD) - Boulder, Denver
  - Architecture & Planning, (PhD) - Boulder, Denver
  - Civil Engineering, (PhD) - Boulder, Denver
  - Computer Science (MS & PhD) - Boulder, Denver
  - Education Administration (All Careers) - Denver
  - Electrical Engineering - Boulder, Colorado Springs, Denver
  - Geography (MA) - Boulder, Colorado Springs
  - Master of Engineering - Boulder, Colorado Springs, Denver
  - Mechanical Engineering - Boulder, Denver
  - Psychology - Boulder, Colorado Springs, Denver
  - Public Affairs - Colorado Springs, Denver

Enrollment and the dropping of Intercampus Enrollment course(s) can only be performed by the student's Home Campus Registrar's Office.

Students enrolled for course(s) at a Host Campus are responsible for requesting the adding and/or dropping of courses within the host campus's deadlines, published on the Host Campus Academic Calendar.

Any questions regarding this program should be directed to the "Home Campus" Intercampus Enrollment Coordinator within the Registrar's Office.

To review the policy in full, please click here (https://www.cu.edu/ope/aps/) and search policy number 800

Inter-Institutional Program

CU Denver degree seeking students can take courses to count towards degree completion or fulfill pre-requisites for CU Denver courses, by taking courses at Community College of Denver (CCD) through the Inter-Institutional Program.

To be eligible to participate in the Inter-Institutional program between CU Denver and CCD, a student will need to follow the steps outlined below. Please note, there are restrictions that will apply:

- Consult your department chair, Dean, or advisor to verify that the courses apply toward your degree requirements.
- Must be a CU Denver, degree-seeking student.
- Must be enrolled in classes at CU Denver during the same term as requested enrollment at CCD.
- Apply for Admission as a non-degree seeking student and register for classes at CCD according to the published deadlines for the Inter-Institutional Program.
- Obtain and complete the Inter-Institutional Application and Registration form (https://www.ucdenver.edu/registrar/student-resources/forms/).
- Registration form must be approved and signed by the student's Academic Advisor, prior to submitting to the Registrar's Office.
- Submit the completed Inter-Institutional forms to the Registrar's Office at CU Denver for approval, prior to the published deadline listed on the form.
- Waitlisted CCD classes are not eligible for the Inter-Institutional program.
- Online classes are not eligible for the Inter-Institutional program.
- Remedial courses are not eligible for the Inter-Institutional program.
- Credit hours taken at CCD must be equal to or less than the number of enrolled credits taken at CU Denver. Enrollment credits may not exceed 9 credit hours or two full-term classes (whichever may be higher) per semester.
- CU Denver students are required to meet all CCD course prerequisites prior to registration.
- Tuition and fees for all classes will be billed through CU Denver and payment must be made according to published deadlines.
- Enrollment credit hours at CCD through the Inter-Institutional program are **not** eligible for Financial Aid.
- Students must follow the CCD academic calendar concerning all deadline dates.
- Courses must be added or dropped by the published date on the Inter-Institutional form.
- It is the student's responsibility to verify all CCD deadline dates, as they are different than CU Denver's Academic Calendar deadlines.
- Any registration modifications must be submitted to both Registrar Offices at CCD and CU Denver.
- If classes are not dropped by CCD's drop deadline date, you may receive an "F" as a letter grade on your transcripts.
- At the end of the term, CU Denver students must obtain an official transcript from CCD and submit it to CU Denver Transfer Articulation for transfer credits.

Lifelong Learners Program

Area residents who are 60 years of age or older may attend classes at the University of Colorado Denver on a non-credit/non-tuition basis during the fall and spring semesters.

Note: Each academic department/unit may have its own policy regarding your acceptance into a specific class. Senior citizens may take any course (offered at the Downtown Campus) listed in the online course schedule except: courses which require laboratory or special equipment use, computer courses, courses offered through the Division of Extended Studies, courses with additional fees, CU online courses, or Anschutz Medical campus courses, and intensive and/or module courses (i.e. Maymester, six-week, or hybrid).

Acceptance into a class will be determined by the instructor, based on space availability, and the previous level of education obtained by the senior citizen student. Participants may register for classes beginning on the first day of class. The last day to register for a class via the Lifelong Learners Program is the second Friday after classes begin. Submissions after this day will not be reviewed. A limit of two courses may be taken per semester.

Note: The instructor is **not** required to review written or oral exams, or assignments.

For more information about this program, please visit the Lifelong Learners webpage (https://www.ucdenver.edu/lifelong-learners/).

Pooled Courses at Metropolitan State University of Denver

Certain courses in the College of Liberal Arts and Sciences and the College of Arts & Media at CU Denver may be taken by Metropolitan State University of Denver students and a number of courses at Metropolitan State University of Denver (MSU Denver) may be taken by CU Denver students. Pooled courses and restrictions/policies are listed on the Metro Pooled website (https://www.ucdenver.edu/student/registration-planning/register-for-classes/pooled-classes/) each semester. Undergraduate students at the University of Colorado Denver Campus can register for pooled classes in UCDAccess using the 5-digit class number. Some restrictions apply to the pooled courses.

Grading, Credits, and Exams

For more information about Grading, Credits, and Exams, please refer to the links below.

- Academic Standing (p. 71)
- Credits and Grading (p. 71)
- Explanation of Course Numbers (p. 73)
- Explanation of Semester Hours (p. 73)
- Final Examinations (p. 73)
- Grade Forgiveness (p. 73)

Academic Standing

Click here (p. 109) for more information about the Academic Standing Policy.

Credits and Grading

The following grading system and policies have been standardized for all academic units of the university.

Grade Symbols

The instructor is responsible for whatever grade symbol (e.g., A, B, C, D, F, S, U, I or IP) is to be assigned. Special symbols (NC and W) are indications of registration or grade status and are not assigned by the instructor. Pass/fail (e.g. P+, P, F) designations are not assigned by the instructor but are automatically converted by the grade application system, as explained under "Pass/Fail Procedure."

Standard Grades	Quality Points
A = superior/excellent	4.000
A(-) =	3.700
B(+) =	3.300
B = good/better than average	3.000
B(-) =	2.700
C(+) =	2.300
C = competent/average	2.000
C(-) =	1.700
D(+) -	1.300
D =	1.000
D(-) = minimum passing	0.700
F = failing	0

Note: Instructors may, at their discretion, use the **plus/minus** system but are not required to do so.

Grade	Explanation
H/P/F	Honors/Pass/Fail - intended for honors courses; semester hours count toward the degree but are not included in the GPA
I	Incomplete - converted to an F if not completed within one year
IP	In progress thesis at the graduate level only
NC	Indicates registration on a no-credit basis
W	Indicates withdrawal without credit
P+	Awarded when the standard letter grade earned for the course would have been C- or above. P+ grade does not impact the student's GPA
P	Awarded when the standard letter grade earned for the course would have been D+, D, or D-. P grade does not impact the student's GPA
F	Fail with an impact to the student's GPA
S	Satisfactory - Course requirements are satisfied or expectations are met. Does not impact the student's GPA
U	Unsatisfactory - Course requirements are not satisfied or expectations are not met. Does not impact the student's GPA

- Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

Pass+/Pass/Fail

1. Students who wish to request a course be graded on a pass/fail basis (or to revert from pass/fail to graded status) may do so up until the tenth week of the term for 16-week fall or spring session, or until the withdraw deadline of the eight-week or five-week fall or spring session, or summer session.
2. Up to 16 semester hours of course work may be taken on a pass/fail basis and credited toward the bachelor's degree. Only six hours of course work may be taken pass/fail in any given semester. (***Note:*** Individual schools and colleges may have additional restrictions as to pass/fail credits. See the specific school/college specific policy section below.)
3. Instructors will not be informed of pass/fail registration. All students who register for a pass/fail appear on the regular class roster, and a normal letter grade is assigned by the professor. When grades are received in the Registrar's Office, those registrations with a pass/fail designation are automatically converted by the grade application system. Courses taken pass/fail will be included in hours toward graduation. Grades of C- and above convert to P+. Grades of D+, D, and D- convert to grades of P. Pass grades (P+ and P) are not included in a student's GPA. An F grade in a course taken pass/fail will be included in the GPA.
4. Pass/fail registration records are maintained by the Registrar's Office.
5. Exceptions to the pass/fail regulations are permitted for specified courses offered by the School of Education & Human Development, the extended studies programs and study abroad programs.

6. Graduate degree students can exercise the pass/fail option for undergraduate courses only. A grade of P+ or P will not be acceptable for graduate credit to satisfy any degree requirement.

Students who register for a course on a pass/fail basis may not later (after the stated deadline) decide to receive a letter grade.

To request the P+/P/F grading scale, students must complete and submit the pass/fail form (https://www.ucdenver.edu/registrar/student-resources/forms/).

Notes:

- Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.
- In the event of a transfer, the receiving institution may not accept a P + grade for transfer credit.

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COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 296)
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School of Education and Human Development (p. 878)
School of Public Affairs (p. 968)

No Credit

Students may register for a course on a no-credit basis. Up until the tenth week of the term, for 16-week fall or spring sessions, or until the withdraw deadline of the eight-week or five-week fall or spring session, or summer session. No grade or credit is awarded but full tuition and fees will be charged. The transcript reflects the name of the course taken and a N/C notation.

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Incomplete Grade

An I is an incomplete grade. Policies with respect to I grades are available in the individual college and school dean's offices.

An I is given only when students, for reasons beyond their control, have been unable to complete course requirements. A substantial amount of work must have been satisfactorily completed before approval for such a grade is given.

The instructor who assigns an I sets the conditions under which the course work can be completed and the time limit for its completion. The student is expected to complete the requirements by the established deadline and not retake the entire course.

It is the instructor's and/or the student's decision whether a course should be retaken. If a course is retaken, it must be completed on the Denver Campus or in extended studies classes. The student must re-register for the course and pay the appropriate tuition.

The final grade, if retaking the course, does not result in deletion of the I grade on the original course from the transcript. A second entry is posted on the transcript to show the final grade for the new attempt.

At the end of one year, I grades for courses that are not completed are changed to an F.

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Grade Appeals

The Office of Registrar does not have an official Grade Appeals policy. For more information, please refer to each school/college for the policies.

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Final Grades

Final grades are available approximately within one week after the end of the semester and can be accessed by logging into the UCDAccess portal or by ordering an official transcript. If a final grade is not reflected by the posted deadline (https://www.ucdenver.edu/student/registration-planning/academic-calendars/), contact the Instructor of the course.

By default, all of our instructors award letter or incomplete grades. Click here (https://www.ucdenver.edu/registrar/student-resources/grades/) for more information regarding Grades at CU Denver.

GPA Calculation

GPA is computed by multiplying the credit points per hour (for example, B = 3) by the number of semester hours for each course. Total the hours, total the credit points and divide the total points by the total hours. Grades of P+, P, NC, S, U, ***, W, IP, and I are not included in the GPA. I grades that are not completed within one year are calculated as F in the GPA.

If a course is repeated, all grades earned are used in determining the GPA. Grades received at another institution are not included in the University of Colorado GPA.

Undergraduate, graduate and non-degree graduate GPAs are calculated separately. Enrollment in a second undergraduate or graduate program will not generate a second undergraduate or graduate GPA.

Students should refer to their academic dean's office for individual GPA calculations as they relate to academic progress and graduation from their college or school.

Sample GPA Calculation

Grade Earned:	Credit Points per Hour:	x Credit Hours:	= Credit Points in Course
A	4.000	4.000	16.000
A-	3.700	4.000	14.800
B+	3.300	4.000	13.200

P	-	3.000	(excluded)
F	0	3.000	0

Total of 15 credit hours with 44 credit points, so 44/15 = 2.930 GPA

Explanation of Course Numbers

- Courses numbered 1000-2999 are considered lower-division undergraduate.
- Courses numbered 3000-4999 are considered upper division undergraduate.
- Courses at the 5000 level and above are graduate.

Explanation of Semester Hours

The University of Colorado Denver follows a semester term system with a standard-based academic calendar for the purposes of Title IV financial aid delivery. Semesters typically include 15 weeks of instruction, in addition to one finals week and one break week in the Fall and Spring semesters. Summer sessions are typically less than 15-weeks, but adhere to the policy in terms of contact hours and the amount of work required. Sessions within the semester term may also be scheduled for certain academic programs (for example, variable length sessions) that have a shorter number of weeks.

The University of Colorado Denver is on a semester credit hour system. A credit hour is the numeric measure of the instructional, research and/or other academic work over the length of a semester, and the value of a unit is calculated based upon standard semester credit hour formulas. A credit hour includes a combination of instructional contact time and out-of-class student work.

For every semester credit hour enrolled, students should expect to spend a minimum of 750 minutes in class and a minimum of 100 minutes spent on school work outside of class (approximately 50 minutes of instructional time per week and between one to two hours of school work outside of class).

Final Examinations

All students enrolled in a course for credit are required to attend a final examination unless the professor has made previous arrangements. All faculty are to alert students about the date, time, and location of the final examination in a timely manner. With approval from the appropriate department, final examinations may be removed from a course.

If a student has three or more finals on the same day, the student has the ability to change the time of one final with approval from the instructor of the final they wish to change. Students should check their final exam schedule for conflicts as soon as possible and alert their instructors promptly and prior to the scheduled final examination.

Grade Forgiveness

If you would like to request Grade Forgiveness for a course, please complete the Grade Forgiveness Form (https://www.ucdenver.edu/registrar/student-resources/forms/). You must be fully enrolled into the class (waitlisted courses are not eligible) before completing this form. Submit this form by the Grade Forgiveness Deadline for the semester in which the course is being offered per the Academic Calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/). Submission of this form does not automatically grant Grade Forgiveness. Students should check their University email account for communications from the Registrar's Office regarding the status of their request.

Students may also cancel their Grade Forgiveness request by this same deadline.

Click here (p. 110) to for more information about the Grade Forgiveness Policy.

Transfer Credit

To learn more about our transfer credit process, please see the links below for more information.

- Transferring to CU Denver as a New or Current Student (p. 73)
- Minimum Transfer Standards (p. 75)
- Accepted Courses for Transfer (p. 76)
- Courses Not Accepted for Transfer (p. 78)
- Advanced Placement (AP) Program (p. 78)
- Cambridge A-Levels (p. 84)
- College-Level Examination Program (CLEP) (p. 88)
- DSST/ DANTES Exam Credit (p. 92)
- International Baccalaureate (IB) Diploma Program (p. 95)
- Joint Services Transcript Credit (p. 103)

Transferring to CU Denver as a New or Current Student

After all transcripts have been received, the Office of the Registrar prepares an initial transfer credit report, indicating which courses are accepted in general transfer by CU Denver. Students will receive this report along with their admission decision. At this time, students are encouraged to contact their academic advisor, who will determine how transferred credit applies to specific degree requirements, sometimes using automated systems and with assistance from academic departments. Academic units make all final decisions regarding application of transfer credit to degree requirements. Transfer credit evaluations are valid only for degree programs offered entirely at CU Denver.

Courses are accepted in initial transfer and applied to graduation requirements at CU Denver at the same academic level as on the transcript from the sending institution. Transfer courses with similar content to CU Denver courses (but are listed on the transcript at a different level) may be substituted upon approval from the academic unit. Such courses, however, apply to overall requirements at the level listed by the sending institution unless an exception is granted. Only undergraduate courses are considered in transfer. Though unofficial transcripts may be used for admissions decisioning and initial transfer credit review, official transcripts must be submitted to the Office of Admissions for validation before the census date of a student's first term. Failure to do so will result in a registration hold and could impact your ability to graduate.

School/College Specific Policy

College of Arts & Media

College of Arts & Media (CAM) degree programs involve carefully structured sequences of course work, designed to build student knowledge, skills and dispositions toward academic, artistic and

professional outcomes. Students interested in transferring to pursue a CAM degree should contact CAM advising in advance at CAMadvising@ucdenver.edu to plan out their transfer credits and subsequent University of Colorado Denver course work. As part of this discussion, CAM advisors can help students determine the best semester in which to transfer, taking into consideration each student's desired timeline toward graduation and program requirements.

College of Engineering, Design and Computing

Transfer students should make an advising appointment as soon as possible after being admitted to the college.

Students must contact the department to which they've been admitted to schedule an appointment with a faculty advisor.

To expedite the advising process, please bring a copy of your transcripts from all institutions you have attended, copies of course descriptions for any courses you wish to have considered for transfer and, if possible, a syllabus for each of those courses. Only courses with a grade of C- or better will be considered for transfer credit. Pass/fail courses, internship courses, research-related courses and special topics courses will not be considered for transfer credit.

College of Liberal Arts and Sciences

Additional information regarding the applicability of College of Liberal Arts and Sciences (CLAS) discipline transfer courses, including the transfer course evaluation process can be found in the CLAS Policy (p. 380) section of the catalog under Transfer Credit Information.

gtPathways Curriculum

The Colorado Department of Higher Education oversees the Guaranteed Transfer (gtPathways) program, which provides for guaranteed transfer, and more importantly, guaranteed application of credit toward lower-division general education credit requirements at Colorado public institutions of higher education. All gtPathways approved courses undergo statewide faculty review, and all lower division CU Denver Core courses are gtPathways approved. Please see the list of Core courses (p. 122) for their gtPathways content area.

Statewide Transfer Articulation Agreements

In compliance with Colorado's Statewide Transfer Policy, students may transfer credit from a Colorado community college on a course-by-course basis or by completing an associate of arts (AA) or associate of science (AS) degree. Students who complete an AA/AS degree may be guaranteed full transfer of the associate degree (60 credits maximum).

The guaranteed transfer program applies only to students who began Colorado community college studies in fall 2003 or later and who meet the following requirements:

- Complete an AA/AS degree, which includes 31 credits of state-guaranteed general education courses
- Earn credit only at Colorado community colleges within the last 10 years
- Earn a grade of C- or better in each course

Statewide articulation agreements are in place governing transfer of students from Colorado community colleges: Transfer Degrees | Higher Education (colorado.gov) (https://highered.colorado.gov/transfer-degrees/)

Transfer advising plans for Colorado community college students are available from the Office of Admissions and at www.ucdenver.edu/admissions (http://www.ucdenver.edu/admissions/). In addition, an admissions representative can assist students with planning a transfer program of study. Representatives regularly visit Colorado community colleges. Call the Office of Admissions at 303-315-2601 or email admissions@ucdenver.edu for additional information.

School/College Specific Policy

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING

The College of Engineering, Design and Computing has formal transfer agreements with all Colorado community colleges, including the following Denver metro-area community colleges:

Arapahoe Community College (Littleton) 303-797-4222
Community College of Aurora 303-360-4700
Community College of Denver 303-556-2600
Front Range Community College (Westminster) 303-404-5000
Red Rocks Community College (Lakewood) 303-914-6600

Students interested in transferring should contact the engineering department to which they plan to transfer and the respective community college counseling office at the phone number indicated above.

Transferability of Modified Grades

The University of Colorado Denver will be accommodating the following grading modifications to traditional transfer admissions and enrollment in response to the COVID-19 pandemic. These modified processes apply to existing undergraduate and prospective students across CU Denver and from institutions across Colorado and beyond.

Transfer credit – Transfer students from an institution other than CU Denver and CU Denver students transferring to another CU Denver program through Intra-University Transfer (IUT), who took classes in Spring and beyond, must meet the following modified requirements to have courses transferred with credit:

- Non-letter grades (P, P+, S, etc.) appearing on a student transcript from an institution outside CU Denver starting Spring 2020 and beyond will be accepted and applied to degree and/or CU Denver core, if the non-letter grade is defined as a C- or better.
- Any course with a non-letter grade that lacks an equivalence to a traditional letter grade will be handled by the CU Denver Office of the Registrar on a case-by-case basis.

Adjusted major/minor/certificate criteria for College of Arts and Media (CAM) – Transfer students from an institution other than CU Denver and CU Denver students transferring to CAM by an IUT, who took classes with modified grading in Spring 2020 and beyond, must meet the following requirements for course transferability in progression towards CAM major, minor, or certificate programs:

- For students applying with IUT credits toward transfer, lettered or modified grades representing a D- or higher (P/P+/S, etc.) will be applied as transferable toward a CAM major, minor or certificate requirement.
- For students applying from an institution other than CU Denver, lettered or modified grades representing a C- or higher (P+/S, etc.) will

be applied as transferable toward a CAM major, minor or certificate requirement.

- Any course with a non-letter grade that lacks an equivalence to a traditional letter grade will be handled on a case-by-case basis.

Transferability of courses per the CAM grade modifications identified above will only be applicable toward CAM degrees, majors, minors, and certificates. Courses below the C- threshold will not be IUT transferrable towards other degrees and programs at CU Denver

Degree entrance criteria for transfer students – Transfer students from an institution other than CU Denver and CU Denver students transferring to another CU Denver program through IUT, will still be expected to meet college/school admissions requirements for direct admit into their program of choice.

- CU Denver will only accept the cumulative GPA, as calculated and documented by the students sending institution and reported on the students submitted transcript(s).
- For current CU Denver students who opted into Spring and/or Summer 2020 P/P+/NP grades, original letter grades will not be used to calculate cumulative transfer GPA.
- In the occurrence that an institution other than CU Denver allows for appeals to non-letter grades (P/P+/S, etc.), resulting in an impact to the student's cumulative transfer GPA, the student must contact CU Denver's Office of the Registrar (registrar@ucdenver.edu) and re-submit any official transcript with the revised cumulative GPA. *CU Denver's Office of the Registrar will re-evaluate degree admissibility on a case-by-case basis. A new transcript showing a higher GPA will not automatically be considered for degree/admissions admissibility.*
- If a CU Denver student elects to change their grade to a P+/P/NP in any course, they will be unable to appeal a reversal of their request once processed, and will only be able to transfer credits and cumulative GPA as documented on their transcript.

Adjusted degree entrance criteria for College of Engineering, Design and Computing (CEDC) – Transfer students from an institution other than CU Denver and CU Denver students transferring to CEDC by an IUT, who took classes in Spring 2020 or beyond, must meet the following requirements to enter into a CEDC major.

- For all CEDC degrees EXCEPT the Bachelor of Arts in Computer Science and the Bachelor of Science in Construction Management:
  - Min 2.5 cumulative GPA. For current CU Denver students who opted into Spring and/or 2020 P+/P/NP grades and non-letter grades will not be used to calculate cumulative GPA.
  - C- or better or P+/S or equivalent grade in Calculus I and Calculus based Physics I with corresponding lab.
  - Non-letter grades (P/P+/S, etc.) appearing on a student transcript from an institution outside CU Denver in Spring 2020 or later in Calculus I and Calculus based Physics I, will be accepted if the non-letter grade is defined as a C- or better.
  - Any course with a non-letter grade that lacks an equivalence to a traditional letter grade will be handled on a case-by-case basis.
- For the Bachelor of Arts in Computer Science and the Bachelor of Science in Construction Management degrees:
  - Min 2.5 cumulative GPA. For current CU Denver students who opted into Spring and/or Summer 2020, P+/P/NP grades and non-letter grades will not be used to calculate overall GPA.
  - Completion of at least one of the following math courses with a grade of C- or better or P+/S or equivalent grade: College Algebra, College Trigonometry, Pre-Calculus, Calculus I, or Calculus II.
  - Non-letter grades (P/P+/S, etc.) appearing on a student transcript from an institution outside CU Denver in Spring 2020 and beyond, in College Algebra, College Trigonometry, Pre-Calculus, Calculus I, or Calculus II, will be accepted if the non-letter grade is defined as a C- or better.
  - Any course with a non-letter grade that lacks an equivalence to a traditional letter grade will be handled on a case-by-case basis.

Minimum Transfer Standards

Student course work of comparable content and scope to that of CU Denver curriculum will be considered for transfer credit if it was completed at a college or university with regional accreditation. If coursework was completed at an institution not regionally accredited, the student may specifically request that credit be considered in transfer by initiating a review process that begins with the student's academic advisor and is approved by the dean responsible for the student's curriculum. Only courses in which a grade of C- or better (1.700) was earned are considered for transfer. Courses in which a grade of Pass (P) was earned are considered for transfer only if a grade of Pass at the sending institution is defined as a C- or better. Courses identified on transcripts as State of Colorado guaranteed transfer courses (gtPathways) are always accepted in transfer (with C- or better grades) and applied to degree requirements per gtPathways guidelines.

Undergraduate transfer credit older than 10 years will not be initially transferred. Credit older than 10 years will be reviewed for applicability to degree requirements by the academic department. To review the policy in full, please click here (https://www.ucdenver.edu/policies/) and search policy number 7006.

Credit Hour Conversion

The University of Colorado Denver is on a 16-week fall and spring semester system. Summer terms, study abroad programs, and independent learning vary in length but are reported in semester hours. Students who transfer from a quarter-based institution will receive the following conversion:

1 quarter hour = 0.67 semester hours
Example: 4 quarter hours = 2.7 semester hours

Maximum Number of Transfer Credit Hours Accepted

School/College Specific Policy

Business School

The Business School generally limits its applicability of business course credits to those that are comparable to lower-division business courses at CU Denver. Students who have taken upper-division business courses from an Association for Advancement of Collegiate Schools of Business (AACSB) accredited business program may request review of these courses for possible transfer by contacting the Business School advising office. All courses taken in their major must be completed at CU Denver.

For students newly admitted to the Business School and former business students readmitted to the school after an absence of three semesters, applicable credits up to eight years old will be counted toward business degree requirements. Courses more than eight years old will be evaluated

individually for their current relevance to the degree program. Students may be required to update their knowledge by taking additional courses when past courses are outdated; in such cases, credit will be given for both courses.

College of Architecture and Planning

For students newly admitted to the College of Architecture and Planning degree programs and former students readmitted to a program after an absence of three semesters, applicable major-specific credits up to ten years old will be counted toward degree requirements. Major-specific courses that are more than ten years old will be evaluated individually for their current relevance to the degree program. Students may be required to update their knowledge by taking additional courses when past courses are outdated.

College of Arts & Media

College of Arts & Media (CAM) degree programs involve carefully structured sequences of course work, designed to build student knowledge, skills and dispositions toward academic, artistic and professional outcomes. Students interested in transferring to pursue a CAM degree should contact CAM advising in advance at CAMadvising@ucdenver.edu to plan out their transfer credits and subsequent University of Colorado Denver course work. As part of this discussion, CAM advisors can help students determine the best semester in which to transfer, taking into consideration each student's desired timeline toward graduation and program requirements.

College of Engineering, Design and Computing

The College of Engineering, Design and Computing, in general, requires that engineering course transfer credit must come from an Accreditation Board for Engineering and Technology (ABET) accredited engineering program to be acceptable for degree purposes. Engineering technology courses are not considered equivalent to engineering courses.

Transfer Credit Level Determination

School/College Specific Policy

College of Arts & Media

College of Arts & Media (CAM) degree programs involve carefully structured sequences of course work, designed to build student knowledge, skills and dispositions toward academic, artistic and professional outcomes. Students interested in transferring to pursue a CAM degree should contact CAM advising in advance at CAMadvising@ucdenver.edu to plan out their transfer credits and subsequent University of Colorado Denver coursework. As part of this discussion, CAM advisors can help students determine the best semester in which to transfer, taking into consideration each student's desired timeline toward graduation and program requirements.

College of Liberal Arts and Sciences

Additional information regarding the applicability of College of Liberal Arts and Sciences (CLAS) discipline transfer courses, including the transfer course evaluation process can be found in the CLAS Policy (p. 380) section of the catalog under Transfer Credit Information.

Accepted Courses for Transfer

Military Service and Schooling

To have credit for educational experiences evaluated, applicants with military experience will be required to submit the DD-214 to Veteran & Military Student Services. Applicants should also submit the Smart Transcript and official Dantes Subject Standard Test (DSST) score reports (if applicable) to the Office of Admissions for additional credit consideration. For students with other military credit for which a separate transcript is issued, such as Community College of the Air Force (CCAF) or Army/American Council on Education Registry Transcript System (AARTS), official transcripts should be sent to the Office of Admissions.

It is the policy of CU Denver to award transfer credit for military courses and/or military service based on the recommendations of the American Council on Education (ACE)'s Guide to the Evaluation of Education Experiences in the Armed Services, provided such credit is generally applicable to CU Denver programs of study. For DSST exams, only upper-level credit as recommended by the ACE guide is considered in transfer. For military transcripts such as CCAF and AARTS, transfer credit is considered on the same basis as transcripts from traditional collegiate institutions.

Upon review of the Certificate of Release of Discharge from Active Duty form (DD-214)/Member 4 Service 2 or additional documentation as required either elective or core course credit will be awarded based on ACE recommendations.

Element of Service	Course Awarded	Credit Hours Awarded	CU Denver Undergraduate Core Curriculum Category or Requirement Fulfilled
Basic Training	HUMN 1999ME	3	Humanities
Non-Commissioned Officer's Course	SSCI 1999ME	3	Social Science
Overseas Deployment of at Least 6 Months	None	None	International Perspectives (Waived of Requirement)
Military Language Training Institute	None	None	School/College Foreign Language Graduation Requirement (Waived of Requirement)
Enlisted Rank E4 or higher	None	None	Business Experiential Learning Requirement (Waived of Requirement for Business Majors Only)
Rank E4 or below	XFCR 1999ME	6	General Elective Credit
Rank E5 or higher/ More than 1 enlisted term (5+ years)	XFCR 1999ME and XFCR 3999ME	12	General Elective Credit (6 lower division credits and 6 upper division credits)

The applicability of electives is determined by the student's major and/or college.

For any questions or further information regarding military credit, please contact:

Veteran & Military Student Services
Tivoli Student Union, Suite 124
900 Auraria Parkway
Denver, CO 80204
vmss@ucdenver.edu
303-315-7300

Mailing address:
Veteran & Military Student Services
P.O. Box 173364

Campus 155
Denver, CO 80217-3364

Study Abroad Coursework

Current CU Denver students are encouraged to participate in the various study abroad programs offered through the Office of Global Education (https://www.ucdenver.edu/academics/InternationalPrograms/OIA/globaleducation/Pages/default.aspx).

Before a student studies abroad on a non-CU Denver (third-party) program, they must have all courses pre-approved by the appropriate academic departments as well as their primary school/college advisor. All courses taken abroad must apply towards the degree in some capacity whether that be for major, minor, or elective credit. This pre-approval process must be completed via the Office of Global Education (OGE) Course Approval Form. This form can be found in a student's online OGE application or students can pick up a blank copy in the Office of Global Education. After being signed by all relevant advisors, this form must be submitted to and signed by the Office of Global Education. The Office of Global Education will only process credit back to CU Denver from an accredited institution or provider that has been approved by the office.

Prior to departure, students will be enrolled in the variable-credit placeholder course STDY 3995/5995 (Undergraduate/Graduate) for each term they are abroad. Registration in STDY 3995/5995 maintains full-time enrollment and student status at CU Denver and authorizes the release of financial aid.

Transcripts will be issued by the foreign institution or domestic school of record. Once transcripts are received by the Office of Global Education, the Course Approval Form will be compared to the transcripts. Credits will be transferred to the University and onto the student's transcript following the university's transfer credit policy.

The grades and courses will not appear on the student's transcripts, but earned credits and the issuing institution will appear. Should a student fail a course, no credit will be issued, and the course will not appear on the transcript.

School/College Specific Policy

BUSINESS SCHOOL

Transfer credit from study abroad programs requires prior written approval from the Advising Department. Students must meet with a business staff advisor to determine course acceptability prior to the semester in which they intend to study abroad. Information on the various programs is available at the Office of International Affairs (https://www.ucdenver.edu/academics/internationalprograms/OIA/Pages/default.aspx).

COLLEGE OF LIBERAL ARTS AND SCIENCES

Transfer courses that fall under a college of Liberal Arts and Sciences (CLAS) discipline area must be evaluated prior to the students study abroad experience. Course Approval Forms and detailed course syllabus | description should be sent to clas.studyabroad@ucdenver.edu for review.

University of Colorado Campus Coursework

A current CU Denver student can take courses at other University of Colorado campuses. Those campuses include Boulder and Colorado Springs. However, courses taken at another University of Colorado campus are subject to various transfer rules as stated below:

- When the course is taken, all coursework needs to be submitted to the Office of Admissions.
- Courses will be calculated into the cumulative University of Colorado GPA.
- Course subject codes and numbering are subject to change due to the different curriculum taught at the various campuses. In other words, courses will not be transferred as equivalencies.

School/College Specific Policy

COLLEGE OF ARCHITECTURE AND PLANNING

BS Architecture students must have the written approval of the BS Architecture director or undergraduate academic advisor to register for courses (excluding MSUD pooled courses) offered by other institutions, including other University of Colorado locations. Credit will not be given for courses taken without approval. Grades of C or better must be earned to receive the undergraduate bachelor's degree credit. Generally, only non-architecture electives or lower-division, non-architecture requirements are acceptable for transfer from other institutions once a student has been admitted to the BS Architecture Program. Students who, after admission to the college, take more than 12 semester hours from another institution, must reapply for admission to the college as transfer students and must meet the current admission requirements.

The maximum number of credit hours applied to individual architecture major requirements from transfer coursework must not exceed the number of credit hours given to its equivalent CU Denver course. Excess credit hours from architecture-related transfer coursework will not count toward the 120 credit hours needed for the BS Architecture degree.

COLLEGE OF ARTS & MEDIA

Students should consult the College of Arts & Media in advance at CAM@ucdenver.edu to determine how courses from other University of Colorado campuses may complete degree requirements at CU Denver.

BUSINESS SCHOOL

Business students must have the written approval of the business program director to register for courses (excluding MSUD pooled courses) offered by other institutions, including other University of Colorado locations. Credit will not be given for courses taken without approval. Grades of C- or better must be earned for most transfer credit to receive business degree credit, however, upper division business core must be a C. Generally, only non-business electives or lower-division, non-business requirements are acceptable for transfer from other institutions once a student has been admitted to the Business School.

1. Admitted Business School students may request by email or petition to complete business lower division courses or 3000-level business core courses at another institution as long as:
   a. The student still meets our 30-hour residency rule (Business courses completed at CU Denver),
   b. The student still meets our 45 upper division hours rule (we count upper-division transfer credit toward this 45),
   c. The institution of choice meets our transfer agreements (AACSB, Colorado Community Colleges),
   d. The course is approved for transfer via syllabus review
2. We will not transfer in any of our major courses, international studies, or MGMT 4500 Business Policy and Strategic Management.

SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT
Students should consult with the undergraduate advisor in advance to determine how courses from other University of Colorado campuses may complete degree requirements at CU Denver.

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING
Transfers between campuses of the University of Colorado should be carefully planned to avoid loss of academic credit. Courses and credits required for engineering degrees vary from campus to campus; therefore, students should plan as far ahead as possible. An advisor can help choose the right courses. Such planning should also include contacting the engineering department to which the student plans to transfer at least one semester before the transfer is planned. The transfer student must have at least a 2.000 GPA for 30 hours of credit toward an engineering degree to be eligible to transfer. A higher GPA may be required to transfer directly into the College of Engineering, Design and Computing. In general, calculus, physics and chemistry courses will transfer for full credit. In addition, 12 semester hours of humanities and social sciences electives will usually transfer for full credit. Fundamental computing courses may be unique by campus and should be checked with the campus to which the student is transferring.

Courses Not Accepted for Transfer

Developmental, remedial, religious doctrinal, religious training, single religion, outdoor leadership, and student orientation courses are not accepted in transfer. Prior learning credit through vocational/technical courses, internship, cooperative education, life experience, and work experience are not accepted in initial transfer, but exceptions may be granted by the dean responsible for the student's curriculum. Independent study, special topics, seminars, and experiential learning programs that lack catalog descriptions are not accepted in initial transfer but may be reviewed for transfer consideration by the corresponding academic department. Students wishing to appeal transfer credit decisions should contact their school or college advising office and be prepared to provide a syllabus for the course they are appealing. Except for developmental/remedial courses, academic departments make final decisions on transfer credit appeals.

Program pathways and/or courses identified in transfer agreements between CU Denver and any internal/external partnerships in an academic or programmatic memorandum of understanding will be honored in both the content and program eligibility by which both parties agreed, upon a student's initial transfer. Students who transfer into other CU Denver programs are subject to the additional transfer policies of their receiving school or college, which may result in changes to applicability of credit.

School/College Specific Policy

College of Engineering, Design and Computing

Credit earned from the following courses, College Algebra, College Trigonometry, or Precalculus Mathematics (CU Denver Numbers MATH 1110 College Algebra, MATH 1120 College Trigonometry, MATH 1130 Precalculus Mathematics), will not be applied to the Engineering major requirements, but may be accepted in transfer.

Courses on basic subjects such as mathematics or physics may be acceptable for direct transfer of credit if they were taught as part of an accredited program for all students and were not specifically designated for engineering technology students. Engineering technology courses (courses with technology designations) will not be considered for transfer into an engineering degree program. Students may seek credit for coursework by examination.

Appeals Process

Transfer credit that was not initially accepted by the Office of the Registrar may be appealed through the advising office. Typically, the student will be required to provide a syllabus for the transfer course from the term the course was taken. If it is an international course, the syllabus will need to be in English and the original language. Once the student's petition is approved, the advisor will request that the course be accepted by the Office of the Registrar.

If a dispute cannot be resolved between the student and CU Denver, a student is at liberty to file a formal complaint with the Colorado Department of Higher Education (https://highered.colorado.gov/Academics/Complaints/FileComplaint.aspx).

School/College Specific Policy

College of Arts & Media

If certain courses are not initially accepted by the Office of the Registrar, the student and advisor can discuss the petition process for accepting these courses. If the student's petition is approved, the advising office will request that the Office of the Registrar accept the course(s) in transfer.

College of Engineering, Design and Computing

All requests for consideration of transfer credit and its application toward a degree must be submitted prior to the student's last two semesters at the Denver campus.

College of Liberal Arts and Sciences

Additional information regarding the applicability of College of Liberal Arts and Sciences (CLAS) discipline transfer courses, including the transfer course evaluation process can be found in the CLAS Policy (p. 380) section of the catalog under Transfer Credit Information.

Advanced Placement (AP) Program

The Advanced Placement Program of the College Entrance Examination Board (CEEB) allows students to take advanced work while in high school and then be examined for credit at the college level. Students who take advanced placement courses and subsequently receive scores of 3, 4, or 5 on the CEEB Advanced Placement examination are generally given college credit for lower-level courses in which they have demonstrated proficiency. Refer to the following chart for general information and consult with your advisor to determine how the credit can be applied to your specific degree program. Original, official score reports must be submitted to the Office of Admissions for credit award consideration.

This chart represents academic credit for students admitted to the University of Colorado Denver beginning fall 2021. Students admitted prior to fall 2021 should consult the University Catalog corresponding to the year in which the exam was taken.

Advanced Placement (AP) Charts

Subject Area: Arts

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Art History	5, 4	6	FINE 2600, FINE 2610		Arts or Humanities
Art History	3	3	FINE 2600		Arts or Humanities
Studio Art - Drawing	5, 4, 3	3	FINE 1100		Arts
Studio Art - 2-D Design	5, 4, 3	3	FINE 1400		Arts
Studio Art - 3-D Design	5, 4, 3	3	FINE 1500		Arts

Subject Area: Biology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Biology	5, 4	8	BIOL 2010, BIOL 2011, BIOL 2020, BIOL 2021	SC1	Biological and Physical Sciences with Lab
Biology	3	8	BIOL 1550, BIOL 1560	SC1	Biological and Physical Sciences with Lab

Subject Area: Capstone

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
AP Research	5, 4	6	ENGL2030 (3 credits) and ENGL2999AE (3 credits)*	CO2	Composition
AP Seminar	5, 4	6	ENGL2999AE (3 Credits) and ENGL2999AE (3 credits)		Humanities

* AP Capstone Research ENGL2999AE satisfies the CLAS Communicative Skills requirement for students pursuing a CLAS BA or BS degree.

Subject Area: Chemistry

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Chemistry	5, 4	9	CHEM 2031, CHEM 2038, CHEM 2061, CHEM 2068	SC1	Biological and Physical Sciences with Lab
Chemistry	3	4	CHEM 1474	SC1	Biological and Physical Sciences with Lab

Subject Area: Computer Science

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Computer Science A	5, 4	3	XDEN 1999AE (3 credits)		

Subject Area: Economics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Macroeconomics	5, 4, 3	3	ECON 2012	SS1	Social Sciences
Microeconomics	5, 4, 3	3	ECON 2022	SS1	Social Sciences

Subject Area: English

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
English Literature and Composition	5, 4, 3	3	ENGL 1999AE (3 credits)	AH2	Humanities
English Language and Composition	5, 4, 3	3	ENGL 1020	CO1	Composition

Subject Area: Environmental Science

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Environmental Science	5, 4, 3	4	ENVS 1044, ENVS 1045	SC1	Biological and Physical Sciences with Lab

Subject Area: Ethnic Studies

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
African American Studies	5,4,3	3	ETST 2155	SS3	Humanities or Social Science

Subject Area: Geography

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Human Geography	5, 4, 3	3	GEOG 1302	SS2	Social Sciences

Subject Area: History

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
United States History	5, 4, 3	6	HIST 1361, HIST 1362	HI1	Humanities
World History	5, 4, 3	6	HIST 1016, HIST 1026	HI1	Humanities or International Perspectives
European History	5, 4, 3	6	HIST 1211, HIST 1212	HI1	Humanities or International Perspectives

Subject Area: Languages

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Chinese Language and Culture	5	6	CHIN 2120 (3 credits) ML4 and CHIN 3999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Chinese Language and Culture	4	6	CHIN 2110 (3 credits) ML3 and CHIN 2120 (3 credits)	Not gtPathways	Not approved for CU Denver Core
Chinese Language and Culture	3	3	CHIN 2110 (3 credits) ML3	Not gtPathways	Not approved for CU Denver Core
French Language and Culture	5	6	FREN 2120 (3 credits) ML4 and FREN 3999AE	Not gtPathways	Not approved for CU Denver Core
French Language and Culture	4	6	FREN 2110 (3 credits) ML3 and FREN 2120 (3 credits)	Not gtPathways	Not approved for CU Denver Core
French Language and Culture	3	3	FREN 2110 (3 credits) ML3	Not gtPathways	Not approved for CU Denver Core

German Language and Literature	5	6	GRMN 2130 (3 credits) and GRMN 3999AE	Not gtPathways	Not approved for CU Denver Core
German Language and Literature	4	6	GRMN 2110 (3 credits) ML3 and GRMN 2130 (3 credits)	Not gtPathways	Not approved for CU Denver Core
German Language and Literature	3	3	GRMN 2110 (3 credits) ML3	Not gtPathways	Not approved for CU Denver Core
Italian Language and Culture	5, 4	6	MLNG 2999AE (6 credits)	Not gtPathways	Not approved for CU Denver Core
Italian Language and Culture	3	3	MLNG 2999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Japanese Language and Culture	5, 4	6	MLNG 2999AE (6 credits)	Not gtPathways	Not approved for CU Denver Core
Japanese Language and Culture	3	3	MLNG 2999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Spanish Language and Culture	5	6	SPAN 2120 (3 credits) ML4 and SPAN 3999AE (3 credits)	AH4	Arts or Humanities
Spanish Language and Culture	4	6	SPAN 2110 (3 credits) ML3 and SPAN 2120 (3 credits)	AH4	Arts or Humanities
Spanish Language and Culture	3	3	SPAN 2110 (3 credits) ML3	AH4	Arts or Humanities
French Literature	5	6	FREN 3999AE (6 credits)	Not gtPathways	Not approved for CU Denver Core
French Literature	4	3	FREN 3999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
French Literature	3	3	FREN 2120 (3 credits) ML4	Not gtPathways	Not approved for CU Denver Core
Spanish Literature	5	6	SPAN 3999AE (6 credits)	Not gtPathways	Not approved for CU Denver Core
Spanish Literature	4	3	SPAN 3999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Spanish Literature	3	3	SPAN 2120 (3 credits) ML4	Not gtPathways	Not approved for CU Denver Core
Latin	5, 4	6	LATN 2010 (3 credits), LATN 2020 (3 credits)	Not gtPathways	Not approved for CU Denver Core
Latin	3	3	LATN 2010 (3 credits)	Not gtPathways	Not approved for CU Denver Core

Subject Area: Mathematics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Calculus AB	5, 4	4	MATH 1401	MA1	Mathematics
Calculus AB	3	3	MATH 1999AE (3 credits)	MA1	Mathematics
Calculus BC	5, 4	8	MATH 1401, MATH 2411	MA1	Mathematics
Calculus BC	3 - With AB Subscore of 5 or 4	4	MATH 1401	MA1	Mathematics
Calculus BC	3 - With AB Subscore of 3	3	MATH 1999AE (3 credits)	MA1	Mathematics
Precalculus	5, 4	4	MATH 1130	MA1	Mathematics
Precalculus	3	3	MATH 1999AE	MA1	Mathematics
Statistics	5, 4, 3	3	MATH 2830 (3 credits)	MA1	Mathematics

Subject Area: Music

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Music Theory	5, 4, 3	3	PMUS 1100		

Subject Area: Physics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Physics 1	5, 4	5	PHYS 2010 (4 credits), PHYS 2321 (1 credit)	SC1	Biological and Physical Sciences with Lab
Physics 1	3	4	PHYS 2999AE (4 credits)	SC1	Biological and Physical Sciences with Lab
Physics 2	5, 4	5	PHYS 2020 (4 credits), PHYS 2341 (1 credit)	SC1	Biological and Physical Sciences with Lab
Physics 2	3	4	PHYS 2999AE (4 credits)		Biological and Physical Sciences with Lab
Physics C (Mechanics)	5, 4	5	PHYS 2311 (4 credits), PHYS 2321 (1 credit)	SC1	Biological and Physical Sciences with Lab
Physics C (Mechanics)	3	4	PHYS 2999AE (4 credits)	SC1	Biological and Physical Sciences with Lab
Physics C (Elec and Mag)	5, 4	5	PHYS 2331 (4 credits), PHYS 2341 (1 credit)	SC1	Biological and Physical Sciences with Lab
Physics C (Elec and Mag)	3	4	PHYS 2999AE (4 credits)	SC1	Biological and Physical Sciences with Lab

Subject Area: Political Science

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Government and Politics: United States	5, 4, 3	3	PSCI 1101	SS1	Social Sciences
Government and Politics: Comparative	5, 4, 3	3	PSCI 1001	SS1	Social Sciences

Subject Area: Psychology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CCHE Policy-gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Psychology	5, 4, 3	3	PSYC 1000 and PSYC 1005	SS3	Behavioral Sciences

Notes

**#999AE courses apply as generic credit in the department of the exam subject area.

gtPathways categories identified represent general education credit administered by the Colorado Commission on Higher Education, details found at the CCHE website. Credit for AP exams not identified with a gtPathways category is administered by the University of Colorado Denver, and credit may be applied to a CU Denver Core, major, or elective credit.

For any language in the four-semester sequence.

ML1- First Year, first semester (ex: Beginning Spanish I)

ML2- First Year, second semester (ex: Beginning Spanish II)

ML3- Second Year, first semester (ex: Intermediate Spanish I)

ML4- Second Year, second semester (ex: Intermediate Spanish II)

ML5- Any higher level language courses where language acquisition is needed.

CU Denver School Code:
4875

Send Official Score Reports To:
CU Denver Office of Admissions
Campus Box 167
P.O. Box 173364
Denver, CO 80217-3364

Official Score Reports and Information May Be Obtained By Contacting:
The College Board
AP Services
P.O. Box 6671
Princeton, NJ 08541-6671
888-225-5427

www.collegeboard.org (https://www.collegeboard.org)

Cambridge A-Levels

Incoming students may earn credit from the Cambridge A-Level examinations. Cambridge A-Levels are internationally bench marked qualifications providing excellent preparation for university education. They are taken in over 125 countries and offer a wide variety of different subjects. Cambridge International A-Level qualifications are widely recognized and valued by universities and employers alike. CU Denver does not recognize AS-Levels currently. The acceptable A-Level examinations and credit awards are outlined in the chart linked below. Original, official A-Level score reports must be submitted to International Admissions for credit award consideration.

This chart represents academic credit for students admitted to the University of Colorado Denver beginning fall 2021. Students admitted prior to fall 2021 should consult the University Catalog corresponding to the year in which the exam was taken.

A-Level Exams

This chart represents academic credit that may be awarded to new freshmen or to new transfer students seeking initial academic credit through the A-Level examination program. To receive academic credit, students must present official A-Level scores sent directly to International Admissions.

Credit awarded and course equivalency information in this table applies only to degree programs, including bioengineering, at the University of Colorado Denver. Students seeking academic credit or a waiver of admission requirements for degree programs at the Anschutz Medical Campus need to contact the program directly.

Academic credit is limited to either A-Level credit or CU Denver course credit when students elect to register and successfully complete courses identified in this table as equivalent or content substitution.

Subject Area: Arts

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Design and Textiles	A-E Grade	3	FINE 1999AE (3 credtis) [1]	Arts
Art and Design	A-E Grade	3	FINE 1001	Arts

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Biology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Biology	A-E Grade	8	BIOL 2010, BIOL 2011, BIOL 2020, BIOL 2021	Biological and Physical with Lab
Marine Science	A-E Grade	3	BIOL 1999AE (3 credits) [1]	Biological and Physical with Non-Lab

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Business

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Information Technology	A-E Grade	3	ISMG 1999AE (3 credits) [1]	
Business Studies	A-E Grade	3	BUSN 1999AE (3 credits) [1]	
Business	A-E Grade	3	BUSN 1999AE (3 credits) [1]	
Accounting	A-E Grade	3	ACCT 1999AE (3 credits) [1]	

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Chemistry

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Chemistry	A-E Grade	9	CHEM 2031, CHEM 2038, CHEM 2061, CHEM 2068	Biological and Physical Sciences with Lab

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Classic Studies

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Classical Studies	A-E Grade	3	HUMN 1999AE (3 credits) [1]	Humanities

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Economics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Economics	A-E Grade	6	ECON 2012, ECON 2022	Social Sciences

Subject Area: English

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
English Literature	A-E Grade	3	ENGL 1999AE (3 credits) [1]	Humanities
English Language AS and A Level	A-E Grade	3	ENGL 1010	

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Geography

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Geography	A-E Grade	3	GEOG 1302	Social Sciences

Subject Area: History

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
History	A-E Grade	3	HIST 1999AE (3 credits) [1]	Social Sciences

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: International Studies

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Global Perspectives and Research	A-E Grade	3	INTS 1999AE (3 credtis) [1]	Social Sciences, International Perspectives

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Languages

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Afrikaans (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Arabic (A Level Only)	A-E Grade	5	ARAB 1020	
Chinese (A Level Only)	A-E Grade	5	CHIN 1020	
French (A Level Only)	A-E Grade	5	FREN 1020	
German (A Level Only)	A-E Grade	5	GRMN 1020	
Hindi (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Marathi (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Portguese (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Spanish (A Level Only)	A-E Grade	5	SPAN 1020	
Tamil (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Telugu (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Urdu (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	
Urdu Pakistan (A Level Only)	A-E Grade	5	MLNG 1999AE (5 credits) [1]	

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Mathematics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Mathematics Further	A-E Grade	3	MATH 1999AE [1]	Mathematics
Mathematics	A-E Grade	4	MATH 1999AE [1]	Mathematics

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Music

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Music	A-E Grade	3	PMUS 1001	Arts

Subject Area: Physics

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Physics	A-E Grade	10	PHYS 2010, PHYS 2020, PHYS 2321, PHYS 2341	Biological and Physical Sciences with Lab

Subject Area: Psychology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Psychology (9990)	A-E Grade	3	PSYC 1000 & PSYC 1005	Behavioral Sciences

Subject Area: Religious Studies

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Divinity	A-E Grade	3	RLST 1999AE (3 credits) [1]	Humanities
islamic Studies	A-E Grade	3	RLST 1999AE (3 credits) [1]	Humanities
Hinduism	A-E Grade	3	RLST 1999AE (3 credits) [1]	Humanities

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Sociology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Sociology	A-E Grade	3	SOCY 1001	Social Sciences

Subject Area: Technology

Examination Title	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	CUDenver Undergraduate Core Curriculum Category
Design and Technology	A-E Grade	3	XDEN 1999AE (3 credits) [1]	
Applied Info and Comm Technology	A-E Grade	3	ISMG 1999AE (3 credits) [1]	
Computer Science	A-E Grade	3	CSCI 1999AE (3 credits) [1]	

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Notes

Send Official Score Reports To:
CU Denver Office of Admissions
Campus Box 167
P.O. Box 173364
Denver, CO 80217-3364

College-Level Examination Program (CLEP)

Incoming students may earn university credit by examination in some subject areas in which they have demonstrated college-level proficiency. Interested students may take approved examinations through the College-Level Examination Program (CLEP) of the College Entrance Examination Board (CEEB) testing service.

Acceptable CLEP examinations and credit awards are outlined in the following chart. Original, official CLEP score reports must be submitted to the Office of Admissions for credit award consideration.

This chart represents credit awarded for exams taken from August 2019 and later. For exams taken in prior or future catalog years, consult those academic catalogs for exam equivalency information.

Select CLEP exams taken January 2019 and later will receive gtPathways credit.

College Level Examination Program (CLEP) - gtPathways

Credit award and course equivalency information listed in this table applies only to degree programs completed entirely at the Denver Campus. Health programs at the Anschutz Medical Campus have different credit award and prerequisite policies; visit www.ucdenver.edu/academics (https://www.ucdenver.edu/academics/) and/or contact the program office directly for additional information.

For exams taken in prior or future catalog years, consult those academic catalogs for exam equivalency information.

Subject Area: Composition and Literature

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
American Literature	w/ 50th percentile minimum score	3	ENGL 1999AE [1] (3 hours)	AH2	Humanities
Analyzing and Interpreting Literature	w/ 50th percentile minimum score	3	ENGL 1999AE [1] (3 hours)	AH2	Humanities
College Composition	w/ 50th percentile minimum score	6	ENGL 1020 & ENGL 2030	CO1 & CO2	Composition
College Composition Modular [2]	w/ 50th percentile minimum score	3	ENGL 1020	CO1	Composition
English Literature	w/ 50th percentile minimum score	3	ENGL 1999AE [1] (3 hours)	AH2	Humanities

1 1999AE courses apply as generic credit in the department of the exam subject area.
2 Current CU Denver students are recommended to complete College Composition (do not need essay)

Subject Area: Humanities

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
Humanities	w/ 50th percentile minimum score	3	HUMN 1999AE [1] (3 hours)	AH2	Humanities

1 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Mathematics

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				

College Mathematics	w/ 50th percentile minimum score	3	MATH 1010	MA1	Mathematics
College Algebra	w/ 50th percentile minimum score	4	MATH 1110	MA1	Mathematics
Precalculus	w/ 50th percentile minimum score	4	MATH 1130	MA1	Mathematics
Calculus	w/ 50th percentile minimum score	4	MATH 1401	MA1	Mathematics

Subject Area: Biological and Physical Sciences

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
Biology	w/ 50th percentile minimum score	3	BIOL 1999AE [1] (3 hours)	SC2	Biological and Physical Sciences Non-Lab
Chemistry (See Note 1)	w/ 50th percentile minimum score	6	CHEM 2031, CHEM 2061	SC2	Biological and Physical Sciences Non-Lab
Natural Sciences	w/ 50th percentile minimum score	6	CLAS 1999AE [1] (6 hours)	SC2	Biological and Physical Sciences Non-Lab

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: History

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
History of the U.S. I	w/ 50th percentile minimum score	3	HIST 1361	HI1	Humanities
History of the U.S. II	w/ 50th percentile minimum score	3	HIST 1362	HI1	Humanities
Western Civilization I	w/ 50th percentile minimum score	3	HIST 1211	HI1	Humanities or International Perspectives
Western Civilization II	w/ 50th percentile minimum score	3	HIST 1212	HI1	Humanities or International Perspectives

Subject Area: Social Sciences

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
Introductory Psychology	w/ 50th percentile minimum score	3	PSYC 1000	SS3	Behavioral Sciences
Introduction to Educational Psychology	w/ 50th percentile minimum score	3	PSYC 1999AE [1] (3 hours)	SS3	Behavioral Sciences
Human Growth and Development	w/ 50th percentile minimum score	3	PSYC 2205	SS3	Behavioral Sciences
Introductory Sociology	w/ 50th percentile minimum score	3	SOCY 1001	SS3	Social Sciences
American Government	w/ 50th percentile minimum score	3	PSCI 1101	SS1	Social Sciences

Principles of Macroeconomics	w/ 50th percentile minimum score	3	ECON 2012	SS1	Social Sciences
Principles of Microeconomics	w/ 50th percentile minimum score	3	ECON 2022	SS1	Social Sciences
Social Sciences and History	w/ 50th percentile minimum score	3	CLAS 1999AE [1] (3 hours)	SS1	Social Sciences

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Business

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
Only the following exams are accepted by CU Denver	w/ 50th percentile minimum score:				
Financial Accounting	w/ 50th percentile minimum score	3	ACCT 2200	None	None
Information Systems and Computer Applications	w/ 50th percentile minimum score	3	ISMG 1999AE [1] (3 hours)	None	None

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Languages

CLEP Exam Title	Minimum Exam Score	Credit Hours Awarded	CUDenver Equivalent Course(s)	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
French Language Level 2 Proficiency	59+	9 Credits	FREN 1999AE ML2[1]	AH4	Arts or Humanities
German Language Level 2 Proficiency	60+	9 Credits	MLNG 1999AE [1] ML2	AH4	Arts or Humanities
Spanish Language Level 2 Proficiency	63+	9 Credits	SPAN 1999AE [1] ML2	AH4	Arts or Humanities
Spanish with Writing Level 2 Proficiency	65+	12 Credits	SPAN 1999AE [1] (6 credits), SPAN 2999AE [1] (6 Credits) ML1-ML4	AH4	Arts or Humanities

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Notes

Note 1: Students may take the corresponding CU Denver laboratory course to meet a lab science core curriculum or major requirement. See the academic department for additional information.

***Duplicate credit for exams and/or college courses with similar content is not awarded.**

For any language in the four-semester sequence.

ML1- First Year, first semester (ex: Beginning Spanish I)

ML2- First Year, second semester (ex: Beginning Spanish II)

ML3- Second Year, first semester (ex: Intermediate Spanish I)

ML4- Second Year, second semester (ex: Intermediate Spanish II)

ML5- Any higher level language courses where language acquisition is needed.

CU Denver School Code: 4875

Send Official Score Reports To:
CU Denver Office of Admissions

Campus Box 167
P.O. Box 173364
Denver, CO 80217-3364

Official Score Reports And Information May Be Obtained By Contacting:
The College Board
CLEP Services
P.O. Box 6600
Princeton, NJ 08541-6600
800-257-9558

www.collegeboard.com (https://www.collegeboard.com)

School/College Specific Policy

College of Engineering, Design and Computing

Students may earn credit through certain College-Level Examination Program (CLEP) examinations, provided that they score at the 50th percentile or above. CLEP credit may be applied toward graduation if comparable to CU Denver coursework included in the College of Engineering curriculum. Official CLEP score reports are required for transfer credit consideration.

College of Liberal Arts and Sciences

The use of CLEP subject examinations toward major, minor or certificate requirements is subject to a separate evaluation by the faculty advisor in the department or program. To receive academic credit from CLEP, students must present official test results to the Denver Campus Office of Admissions. A maximum of 30 hours of CLEP credit will count toward the degree.

DSST/ DANTES Exam Credit

Beginning January 2019, incoming students may earn university credit by examination in some subject areas in which they have demonstrated college-level proficiency. Interested students may take approved examinations through the DSST/DANTES testing as a part of their Military Service.

Acceptable DSST examinations and credit awards are outlined in the following chart. Original, official DSST score reports must be submitted to the Office of Admissions for credit award consideration.

DSST Exams - gtPathways

Credit award and course equivalency information listed in this table applies only to degree programs completed entirely at the Denver Campus. Health programs at the Anschutz Medical Campus have different credit award and prerequisite policies; visit www.ucdenver.edu/academics (https://www.ucdenver.edu/academics/) and/or contact the program office directly for additional information.

Beginning Spring 2019, some exams taken January 1, 2019 and later will receive gtPathways designation.

For exams taken in future catalog years, consult those academic catalogs for exam equivalency information.

Subject Area: Arts

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
Art of the Western World	3	FINE 1999AE [1] (3 hours)	AH1	Arts

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Composition

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
Principles of Advanced English Composition	3	ENGL 1020	CO1	Composition

Subject Area: Mathematics

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
Math for Liberal Arts	3	MATH 1010	MA1	Mathematics
Fundamentals of College Algebra	3	MATH 1999AE [1] (3 hours)	MA1	Mathematics
Principles of Statistics	3	MATH 2830	MA1	Mathematics

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: History

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
A History of the Vietnam War	3	HIST 1999AE [1] (3 hours)	HI1	Humanities
History of the Soviet Union	3	HIST 1999AE [1] (3 hours)	HI1	Humanities or International Perspectives
The Civil War and Reconstruction	3	HIST 1999AE [1] (3 hours)	HI1	Humanities

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Biological and Physical Sciences

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
Astronomy	3	PHYS 1999AE [1] (3 hours)	SC2	Biological and Physical Sciences Non-Lab
Environmental Science	3	ENVS 1999AE [1] (3 hours)	SC2	Biological and Physical Sciences Non-Lab
Principles of the Physical Science I	3	PHYS 1999AE [1] (3 hours)	SC2	Biological and Physical Sciences Non-Lab

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Social Sciences

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
General Anthropology	3	ANTH 1999AE [1] (3 hours)	SS3	Behavioral Sciences
Health and Human Development	3	PSYC 3262 - Lower Division Credit Given	SS3	Behavioral Sciences
Human/Cultural Geography	3	GEOG 1999AE	SS2	Social Sciences
Lifespan Developmental Psychology	3	PSYC 2205	SS3	Social Sciences
Organizational Behavior	3	PSYC 3145 - Lower Division Credit Given	SS3	Behavioral Sciences
Substance Abuse	3	CLAS 1999AE [1] (3 hours)	SS3	Behavioral Sciences

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Subject Area: Religion and Philosophy

DSST Exam Title	Credit Hours Awarded	CUDenver Equivalent Course	gtPathways Category	CUDenver Undergraduate Core Curriculum Category
(Only the following exams are accepted by CU Denver)	minimum exam score 400			
Ethics in America	3	PHIL 1020	AH3	Humanities
Intro to World Religions	3	RLST 1999AE [1] (3 hours)	AH3	Humanities

[1] 1999AE courses apply as generic credit in the department of the exam subject area.

Notes

***Duplicate credit for exams and/or college courses with similar content is not awarded.**

Send Official Score Reports To:
CU Denver Office of Admissions
Campus Box 167
P.O. Box 173364
Denver, CO 80217-3364

Official Score Reports And Information May Be Obtained By Contacting:
Get College Credit

https://getcollegecredit.com/scores_transcripts (https://getcollegecredit.com/scores_transcripts/)

www.getcollegecredit.com (https://www.getcollegecredit.com)

International Baccalaureate (IB) Diploma Program

The International Baccalaureate (IB) Diploma Program, available at select high schools, is a rigorous, pre-university course of study emphasizing liberal arts from an international perspective.

In accordance with HB 03-1108, CU Denver will grant at minimum 24 semester hours of credit for any student who has graduated from high school having successfully completed an International Baccalaureate diploma program with a minimum score of 4 on each exam. Credit may be granted for individual IB courses where examinations are completed with at least a score of 4 for students who do not complete an IB diploma program. Refer to the following chart for general information and consult with your advisor to determine how the credit can be applied to your specific degree program. Original, official IB transcripts with exam scores must be submitted to the Office of Admissions for credit award consideration.

This chart represents academic credit for students admitted to the University of Colorado Denver beginning fall 2021. Students admitted prior to fall 2021 should consult the University Catalog corresponding to the year in which the exam was taken.

International Baccalaureate (IB) Charts

Exam Category: Anthropology

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Social and Cultural Anthropology	7, 6, 5, 4	3	ANTH 2102	SS3	Behavioral Science

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Social and Cultural Anthropology	7, 6, 5, 4	3	ANTH 2102	SS3	Behavioral Sciences

Exam Category: Arts

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Visual Arts	7, 6, 5, 4	3	FINE 1001	AH1	Arts

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Visual Arts	7, 6, 5, 4	3	FINE 1001	AH1	Arts

Exam Category: Biology

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Biology	7, 6, 5, 4	8	BIOL 2010, BIOL 2011, BIOL 2020, BIOL 2021	SC1	Biological and Physical Sciences with Lab

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Biology	7, 6, 5, 4	4	BIOL 1560	SC1	Biological and Physical Sciences with Lab

Exam Category: Chemistry

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Chemistry	7, 6, 5	9	CHEM 2031, CHEM 2038, CHEM 2061, CHEM 2068	SC1	Biological and Physical Sciences with Lab
Chemistry	4	4	CHEM 2031, CHEM 2038	SC1	Biological and Physical Sciences with Lab

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Chemistry	7, 6, 5, 4	4	CHEM 1474	SC1	Biological and Physical Sciences with Lab

Exam Category: Business

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Business and Management	7, 6, 5, 4	3	MGMT 1000		

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Business	7, 6, 5, 4	3	MGMT 1000		

Exam Category: Computer Science

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
7, 6, 5, 4	3	XDEN 1999AE (3 credits)			

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
7, 6, 5, 4	3	XDEN 1999AE (3 credits)			

Exam Category: Design

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Design Technology	7, 6, 5, 4	0	Not Accepted		

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Design Technology	7, 6, 5, 4	0	Not Accepted		

Exam Category: Economics

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Economics	7, 6, 5	6	ECON 2012, ECON 2022	SS1	Social Sciences
Economics	4	3	ECON 2012	SS1	Social Sciences

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Economics	7, 6, 5, 4	3	ECON 2012	SS1	Social Sciences

Exam Category: English

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
English A Literature	7, 6, 5, 4	3	ENGL 1999AE (3 credits)	AH2	Humanities
English A Language and Literature	7, 6, 5, 4	3	ENGL 1020	CO1	Composition

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
English A Literature	7, 6, 5, 4	3	ENGL 1999AE (3 credits)	AH2	Humanities
English A Language and Literature	7, 6, 5, 4	3	ENGL 1020	CO1	Composition
Literature and Performance	7, 6, 5, 4	3	HUMN 1999AE (3 credits)		Humanities

Exam Category: Environmental Science

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Environmental System and Societies	7, 6, 5, 4	3	ENVS 1999AE (3 credits)	SC2	Biological and Physical Sciences Non-Lab

Exam Category: Geography

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Geography	7, 6, 5, 4	3	GEOG 1302	SS2	Social Sciences

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Geography	7, 6, 5, 4	3	GEOG 1302	SS2	Social Sciences

Exam Category: Global Politics

HIGHER LEVEL EXAM

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Global Politics	7, 6, 5, 4	3	PSCI1999AE		Social Sciences

Standard level exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Global Politics	7, 6, 5, 4	3	PSCI1999AE		Social Sciences

Exam Category: History

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
History - Americas	7, 6, 5, 4	6	HIST 1361, HIST 1362	HI1	Humanities
History - European	7, 6, 5, 4	6	HIST 1211, HIST 1212	HI1	Humanities or International Perspectives
History - World	7, 6, 5, 4	6	HIST 1016, HIST 1026	HI1	Humanities or International Perspectives

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
History - World	7, 6, 5, 4	3	HIST 1016	HI1	Humanities or International Perspectives

Exam Category: Languages

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
French Language B	7, 6	6	FREN 2120 (3 credits) ML4 and FREN 3999AE (3 credits)	AH4	Arts or Humanities
French Language B	5	6	FREN 2110 (3 credits) ML3 and FREN 2120 (3 credits)	AH4	Arts or Humanities
French Language B	4	3	FREN 2110 (3 credits) ML3	AH4	Arts or Humanities
German Language B	7, 6	6	MLNG 2999AE (3 credits) ML4 and MLNG 3999AE (3 credits)	AH4	Arts or Humanities
German Language B	5	6	MLNG 2999 AE (3 credits) ML3 and MLNG 2999AE (3 credits)	AH4	Arts or Humanities

German Language B	4	3	MLNG 2999AE (3 credits) ML3	AH4	Arts or Humanities
Spanish Language B	7, 6	6	SPAN 2120 (3 credits) ML4 and SPAN 3999AE (3 credits)	AH4	Arts or Humanities
Spanish Language B	5	6	SPAN 2110 (3 credits) ML3 and SPAN 2120 (3 credits)	AH4	Arts or Humanities
Spanish Language B	4	3	SPAN 2110 (3 credits) ML3	AH4	Arts or Humanities
Language B (Other Language)	7, 6	6	MLNG 2999AE (3 credits) ML2, MLNG 3999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Language B (Other Language)	5	6	MLNG 2999AE (6 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Language B (Other Language)	4	3	MLNG 2999AE (3 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Classical Language (Greek)	7, 6, 5	6	GREK 2110 (3 credits) ML3 and GREK 2999AE (3 credits)	Not gtPathways	Not approved for CU Denver Core
Classical Language (Greek)	4	3	GREK 2110 (3 credits) ML3	Not gtPathways	Not approved for CU Denver Core
Classical Language (Latin)	7, 6, 5	6	LATN 2010 (3 credits) ML2 and LATN 2020 (3 credits)	Not gtPathways	Not approved for CU Denver Core
Classical Language (Latin)	4	3	LATN 2010 (3 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Language ab initio	7, 6, 5, 4	0	Not Accepted	Not gtPathways	Not approved for CU Denver Core

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
French Language B	7, 6, 5, 4	3	FREN 2999AE (3 credits) ML2	AH4	Arts or Humanities
German Language B	7, 6, 5, 4	3	MLNG 2999AE (3 credits) ML2	AH4	Arts or Humanities
Spanish Language B	7, 6, 5, 4	3	SPAN 2999AE ML2	AH4	Arts or Humanities
Language B (Other Language)	7, 6, 5, 4	3	MLNG 2999AE (3 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Classical Language (Greek)	7, 6, 5, 4	3	GREK 2999AE (3 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Classical Language (Latin)	7, 6, 5, 4	3	LATN 2999AE (3 credits) ML2	Not gtPathways	Not approved for CU Denver Core
Language ab initio	7, 6, 5, 4	0	Not Accepted	Not gtPathways	Not approved for CU Denver Core

Exam Category: Mathematics

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Mathematics: Applications and Interpretation	7, 6, 5, 4	6	MATH 1999AE		Mathematics
Mathematics: Analysis and Approaches	7, 6, 5, 4	6	MATH 1999AE		Mathematics

Mathematics	7, 6, 5	4	MATH 1401	MA1	Mathematics
Mathematics	4	4	MATH 1130	MA1	Mathematics

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Mathematics: Applications and Interpretation	7, 6, 5, 4	3	MATH 1999AE		Mathematics
Mathematics: Analysis and Approaches	7, 6, 5, 4	3	MATH1999AE		Mathematics
Mathematics	7, 6, 5, 4	3	MATH 1999AE (3 credits)	MA1	Mathematics
Mathematics - Studies	7, 6, 5, 4	3	MATH 1999AE (3 credits)	MA1	Mathematics

Exam Category: Music

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Music	7, 6, 5, 4	3	PMUS 1001	AH1	Arts
Group Performance	7, 6, 5, 4	3	PMUS 1999AE (3 credits)	AH1	Arts

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Music	7, 6, 5, 4	3	PMUS 1001	AH1	Arts
Group Performance	7, 6, 5, 4	3	PMUS 1999AE (3 credits)	AH1	Arts
Solo Performance	7, 6, 5, 4	3	PMUS 1999AE (3 credits)	AH1	Arts
Creating	7, 6, 5, 4	3	PMUS 1999AE (3 credits)	AH1	Arts

Exam Category: Philosophy

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Philosophy	7, 6, 5, 4	3	PHIL 1012	AH3	Humanities

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Philosophy	7, 6, 5, 4	3	PHIL 1012	AH3	Humanities

Exam Category: Physics

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Physics	7, 6, 5	10	PHYS 2010 (3 credits), PHYS 2020 (3 credits), PHYS 2321 (1 credit), and PHYS 2341 (1 credit)	SC1	Biological and Physical Sciences with Lab
Physics	4	5	PHYS 2010 (3 credits) and PHYS 2321 (1 credit)	SC1	Biological and Physical Sciences with Lab

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Physics	7, 6, 5, 4	5	PHYS 2010 (4 credits) and PHYS 2321 (1 credit)	SC1	Biological and Physical Sciences with Lab

Exam Category: Psychology

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Psychology	7, 6, 5, 4	3	PSYC 1000 & PSYC 1005	SS3	Behavioral Sciences

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Psychology	7, 6, 5, 4	3	PSYC 1000 & PSYC 1005	SS3	Behavioral Sciences

Exam Category: Religions

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
World Religions	7, 6, 5, 4	3	RLST 2660	Not gtPathways	Humanities

Exam Category: Sports

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Sports, Exercise and Health Science	7, 6, 5, 4	3	CLAS 1999AE	Not gtPathways	Not approved for CU Denver Core

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Sports, Exercise and Health Science	7, 6, 5, 4	3	CLAS 1999AE	Not gtPathways	Not approved for CU Denver Core

Exam Category: Theatre

Higher Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Theatre	7, 6, 5, 4	3	FITV 1005	AH1	Arts
Theatre - Dance	N/A	0	Not Accepted		
Theatre- Film	7, 6, 4	3	FITV 1050		Arts
Theatre- Film	4	3	FITV 1035		Arts

Standard Level Exam

IB Examination	Score Required	Credit Hours Awarded	CUDenver Equivalent Course(s) or Content Substitution	Applicable gtPathways Category	CUDenver Core Curriculum Category
Theatre	7, 6, 5, 4	3	FITV 1005	AH1	Arts
Theatre - Dance	N/A	0	Not Accepted		
Theatre - Film		3	FITV 1035		Arts

Notes

**#999AE courses apply as generic credit in the department of the exam subject area.

gtPathways categories identified represent general education credit administered by the Colorado Commission on Higher Education, details found at the CCHE website. Credit for both HL and SL International Baccalaureate exams not identified with a gtPathways category is administered by the University of Colorado Denver, and credit may be applied to a CU Denver Core, major, or elective credit.

For any language in the four-semester sequence.

ML1- First Year, first semester (ex: Beginning Spanish I)

ML2- First Year, second semester (ex: Beginning Spanish II)

ML3- Second Year, first semester (ex: Intermediate Spanish I)

ML4- Second Year, second semester (ex: Intermediate Spanish II)

ML5- Any higher level language courses where language acquisition is needed.

CU Denver School Code: 01398

Send Official Score Reports To:
CU Denver Office of Admissions
Campus Box 167, P.O. Box 173364
Denver, CO 80217-3364

Official Score Reports and Information May Be Obtained By Contacting:
International Baccalaureate Organization
Telephone: 301-202-3025
Website: www.ibo.org (https://www.ibo.org)
E-mail: transcripts.ibna@ibo.org

Joint Services Transcript Credit

Beginning Spring 2019, select courses and occupations from the Joint Services Transcript qualify for the Colorado gtPathways program. The courses and occupations in this chart can apply to CU Denver's Undergraduate Core Curriculum. An official copy of the Joint Service Transcript is required for evaluation.

Joint Service Transcript Military Occupations Evaluation

This chart represents academic credit that may be awarded to new freshmen or to new transfer students seeking initial academic credit through the evaluation of their Joint Service Military transcript. To receive academic credit, students must present official Joint Service Transcript to the University of Colorado Denver.

This chart represents academic credit for students admitted to the University of Colorado Denver beginning Spring 2019.

Credit awarded and course equivalency information in this table applies only to degree programs at the University of Colorado Denver.

Academic credit is awarded as University of Colorado Denver general equivalent courses. The specific courses/occupations designate how credit will be applied to the Undergraduate Core Curriculum. Only one course per core category will be applied to the core curriculum requirements. For additional applicability please contact your academic advisor or major department.

Additional Military Experience may be awarded by the Veteran & Military Student Services office. Please see the chart on this page for more information about how credit is awarded for Military Experience.

Military Courses

Core Curriculum Category: Behavioral Sciences

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
AF-2203-0069	Magnet Capstone	Version 1 - Spring 2016-Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3
AR-0704-0029	Occupational Therapy Specialist Advanced Leader (ALC)	Version 1 - Spring 2016-Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3
AR-0707-0011	Basic Environment	Version 1 - Summer 1985-Fall 2010	3	XDEN 1999ME [1] (3 credits)	SS3
AR-1405-0271	Aviation Captain's Career	Versions 1-9 - Summer 1996 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3
AR-1408-0168	Adjutant General Captn Career	Versions 1-8 - Summer 1988 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3
AR-1606-0297	Intelligence Analyst Advanced Leadeer	Version 1 - Summer 2015 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3
NV-0707-0006	Advanced Environmental Management	Version 1 - Spring 2001 to Spring 2003	3	XDEN 1999ME [1] (3 credits)	SS3
MC0501-0007	Career Course DEP	Version 1 - Summer 2014 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SS3

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Biological and Physical Sciences with Lab

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
AR-0702-0022	Medical Laboratory Specialist	Version 1-4 - Spring 1996 to Summer 2020	4	XDEN 1999ME [1] (4 credits)	SC1
AR-0703-0027	Clinical Laboratory	Version 2 Only - Fall 2006 to Spring 2018	4	XDEN 1999ME [1] (4 credits)	SC1
AR-1405-0304	Civil Support Skills	Version 2 Only - Spring 2013 to Summer 2020	4	XDEN 1999ME [1] (4 credits)	SC1
NV-0702-0015	Medical Laboratory Technician	Versions 1-2 - Spring 2012 to Summer 2020	4	XDEN 1999ME [1] (4 credits)	SC1

NV-0801-0009	Operational Water Chemistry and Radiological Controls	Version 2 and 3 Only - Fall 2003 to Summer 2020	4	XDEN 1999ME [1] (4 credits)	SC1
NV-0802-0014	Prototype Training (Engineering Laboratory Technician)	Versions 1-2 - Spring 1990 to Summer 2020	4	XDEN 1999ME [1] (4 credits)	SC1

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Biological and Physical Sciences without Lab

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
DD-1601-0020	Basic Terrain Analysis	Versions 1-2 - Spring 1986 to Spring 2006	3	XDEN 1999ME [1] (3 credits)	SC2
MC-1732-0004	Explosive Ordnance Disposal Exploitation	Version 1 - Fall 2015 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2
MC-2204-0159	Cannon Crewman	Versions 1-2 - Summer 2003 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2
NV-1304-0013	Aerographer's Mate, Class C-1	Versions 1-5 - Fall 1990 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2
NV-1721-0020	Marine Corps Meteorological Oceanographer Analyst Forecaster	Version 1 - Summer 2015 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2
NV-1732-0026	Naval Power School, Enlisted	Versions 1-2 - Spring 1990 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2
NV-1732-0031	Prospective Nuclear Engineer Officer (PNEO)	Version 1-2 - Spring 2001 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	SC2

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Mathematics

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
AR-1402-0278	Operations Research Systems Analysis (ORSA) Military Application	Version 1 - Spring 2013 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	MA1
NV-0707-0002	Preventative Medicine Technician	Version 1-5 to Spring 1989 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	MA1
NV-1715-2239	Electronics Technician (Navigation) Class "A"	Version 1 - Summer 2004 to Spring 2018	3	XDEN 1999ME [1] (3 credits)	MA1
NV-1732-0026	Naval Power School, Enlisted	Version 1-2 - Spring 1990 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	MA1

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Social Sciences

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
AR-1401-0009	Finance Officer Advanced	Versions 1-9 - Fall 1955 to Summer 1975	3	XDEN 1999ME [1] (3 credits)	SS1
AR-1408-0293	Departmental Resource Management	Version 1 - Spring 2001 to Summer 2007	1	XDEN 1999ME [1] (1 credits)	SS1

AR-1408-0293	Departmental Resource Management and Logistics	Version 2 - Spring 2007 to Fall 2016	1	XDEN 1999ME [1] (1 credits)	SS1
AR-1511-0024	Intelligence in Combating Terrorism	All Versions - Fall 1987 to Summer 2018	3	XDEN 1999ME [1] (3 credits)	SS1
AR-1511-0027	Regional Studies	Versions 1-2 - Spring 1990 to Spring 2011	3	XDEN 1999ME [1] (3 credits)	SS1
AR-2202-001	Democratic Sustainment	Version 1 - Summer 2001 to Fall 2004	3	XDEN 1999ME [1] (3 credits)	SS1
DD-1511-0001	National Security Management	Versions 1-3 - Summer 1971 to Summer 1900	3	XDEN 1999ME [1] (3 credits)	SS1
DD-1511-0009	National War College	Version 1 - Summer 1971 to Summer 1990	3	XDEN 1999ME [1] (3 credits)	SS1

1 #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: General Elective Credit

Course	Course Title	Effective Date and Version	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
NV-1714-0073	Nuclear Field "A" (Electrician's Master)	Versions 1-3 - Spring 1993 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	None
NV-1710-0154	Nuclear Field "A" (Machinist Master)	Versions 1-3 - Summer 1991 to Summer 2020	3	XDEN 1999ME [1] (3 credits)	None

1 #999AE courses apply as generic credit in the department of the exam subject area.

Military Occupations

Core Curriculum Category: Behavioral Sciences

Course	Course Title	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
MOS-37F-003	Psychological Operations Specialist	3	XDEN 1999ME [1] (3 credits)	SS3
NER-SO-002	Special Warfare Operator	3	XDEN 1999ME [1] (3 credits)	SS3

1 #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Biological and Physical Sciences with Lab

Course	Course Title	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
MOS-18D-003	Special Forces Medical Sergeant	4	XDEN 1999ME [1] (4 credits)	SC1
MOS-92L-001	Petroleum Laboratory Specialist	4	XDEN 1999ME [1] (4 credits)	SC1
NER-HN-004	Hospitalman	3	XDEN 1999ME [1] (3 credits)	SC1

1 #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Biological and Physical Sciences without Lab

Course	Course Title	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
MOS-68W-001	Health Care Specialist	3	XDEN 1999ME [1] (3 credits)	SC2

1 #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Mathematics

Course	Course Title	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
MOS-35N-03	Signals Intelligence Analyst	3	XDEN 1999ME [1] (3 credits)	MA1
MOS-35P-004	Cryptologic Linguist	3	XDEN 1999ME [1] (3 credits)	MA1
NER-QM-005	Quartermaster	3	XDEN 1999ME [1] (3 credits)	MA1

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Core Curriculum Category: Social Sciences

Course	Course Title	Credit Hours Awarded	gtPathways Content Area	CUDenver Equivalent Course
MOS-18F-002	Special Forces Assistant Operations and Id	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-351C-001	Area Intelligence Technician	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-351M-001	Human Intelligence Collection Technician	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-35G-002	Voice Intercept Technician	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-38B-001	Civil Affairs Specialist	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-38B-002	Civil Affairs Specialist	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-97B-004	Counterintelligence Agent	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-97E-003	Interrogator	3	XDEN 1999ME [1] (3 credits)	SS1
MOS-971A-001	Counterintelligence Technician	3	XDEN 1999ME [1] (3 credits)	SS1
NER-SH-002	Ship's Serviceman	3	XDEN 1999ME [1] (3 credits)	SS1

[1] #999AE courses apply as generic credit in the department of the exam subject area.

Notes

A course must be two credits minimum to apply to CU Denver Core.

For more information about how your military credits apply to your degree program please contact:

Veteran & Military Student Services
Tivoli Student Union, Suite 124
900 Auraria Parkway
Denver, CO 80204
vmss@ucdenver.edu
303-315-7300

Mailing address:
Veteran & Military Student Services
P.O. Box 173364
Campus 155
Denver, CO 80217-3364

Transcripts

Official Transcripts

The official transcript includes the complete undergraduate and graduate academic record of courses taken at all campus locations or divisions of the University of Colorado. It contains the signature of the registrar and the official seal of the university.

Official transcripts with posted grades for any given semester are available approximately one week after final exams. A transcript on which a degree is to be recorded is available approximately six weeks after final exams.

For Denver Campus students, transcripts may be ordered through the online ordering portal by visiting www.ucdenver.edu/transcripts (http://www.ucdenver.edu/transcripts/).

Colorado law allows domestic students with a past due balance to send their transcript to a school or employer only. Students can contact the Registrar's Office for further instructions. International students that have a past due balance to the university will not be granted a transcript.

Transcripts are prepared when a student submits an order online. The official PDF transcript is delivered within 24 hours, and mailed transcripts are processed within one business day. Rush service is available and processed within one business day.

Glossary of Terms

Academic Calendar

The Academic Calendar represents important semester-specific dates and deadlines for students officially registered for courses.

Census

Last day of the semester for students to drop full term classes with a financial adjustment. Student schedule adjustments after this date may lead to adjustments to financial aid/awards package, Department of Veteran Affairs education benefits, or other eligibility benefits that are dependent upon enrollment status. Class drops or withdrawals may impact immigration status for international students. A "W" grade appears on the transcript when courses are dropped after the published Census date.

Credit or Semester Hour

The unit of measurement for college credit. For each credit hour earned, students spend a minimum of 750 minutes in class and a minimum of 100 minutes spent on school work outside of class. Most core classes are three credit hours. Most degrees require 120 credit hours to graduate, however, some require more. Credit hours may also b referred to as “hours”, "units", or “credits.”

Class Level

The student's class level is based on the number of completed credit hours. Class level is determined by the following credit-hour breakdown:

- First-Year/Freshman: 0-29 completed credit hours
- Sophomore: 30-59 completed credit hours
- Junior: 60-89 completed credit hours
- Senior: 90-120 completed credit hours

College or School

An individual degree-granting unit within the University.

At CU Denver, there are seven undergraduate school and colleges:

- Architecture and Planning
- Arts and Media
- Business
- Education and Human Development
- Engineering, Design and Computing
- Liberal Arts and Sciences
- Public Affairs

All of which are part of the University of Colorado Denver. Regardless of what school or college a student has been admitted to, they are a CU Denver student.

Course Drop

Dropping one or more courses, but not all, within a specific term **prior** to census. Dropped courses are not reflected on the student's transcript.

Course Withdrawal

Dropping one or more courses, but not all, within a specific term **after** census. When students withdraw from a course, the course earns a grade of “W,” which will be reflected on the student's transcript, but does not affect a student's GPA.

Core Curriculum

The set of general education requirements all undergraduate CU Denver students must complete.

The core curriculum of the University of Colorado Denver is designed to provide each undergraduate student with a high quality general education based on a liberal arts foundation, while allowing students flexibility based on their individual backgrounds and specific career goals. The Core Curriculum develops multiple literacies, stimulates creative thinking, and utilizes technology. The goal of the University of Colorado Denver Core Curriculum is to engage students in developing sensitivity to diversity and developing their place in an urban environment, as well as in the rapidly changing global environment.

The Core Curriculum includes courses in:

- English
- Math
- Arts
- Humanities
- Behavioral Science
- Social Science
- Biological and Physical Sciences
- Cultural Diversity
- International Perspectives

General Electives

Courses students choose to take in addition to the core curriculum, school or college, and major requirements.

Grades

Please see the Grading System (p. 71) section of the catalog for more information.

Grade Point Average

The grade point average (GPA) is calculated by multiplying the credit hours for the course by the points for the letter grade, totaling all the credit points and dividing them by the number of credit hours included. Pass grades and no-credit courses are not included in a student's GPA.

Student's University of Colorado GPA will not include courses that have been taken at other institutions prior to enrollment at the University of Colorado. The GPA for undergraduate students includes all courses taken as an undergraduate. This includes all grades for courses taken more than once.

Hold

A hold is a service indicator that prevents various services which may include registering for classes, receiving an official transcript and/or diploma, and requesting an enrollment verification. A hold can be placed on a student's record for a variety of reasons that may include financial, health, academic standing, required documentation, and advising. Students can view holds in the UCDAccess student portal. Students should contact the appropriate department to resolve the hold in a timely manner.

Incomplete Grade

Policies with respect to "I" grades are available in the individual college and school dean's offices. Use of the "I" is at the discretion of the course instructor and/or the academic dean's office. Please see the Grades definition for more information.

Lower Division Courses (1000 & 2000 level)

Introductory level survey courses designed for first year/freshmen and sophomores.

Major

As a component of a degree, a major is the area of study chosen by a student to be their main focus of study. The number of credits required for a major varies by degree type and/or the school or college offering the major.

Major Electives

Courses students choose to take within their major that may be required to fulfill the major requirements. Some departments within schools and colleges have approved lists of major electives from which students can choose.

Minor

An optional course of study that allows students to take several classes as an introduction to a specific subject or discipline area outside of their major. Minors require significantly fewer credits than majors and are not required at CU Denver.

Recitation

A class component, in addition to lecture, which involves supplemental discussion of course content.

Requisites

Prerequisites

A course that needs to be taken prior to registration for the next course in the designated sequence.

Co-requisites

A course(s) that must be completed concurrently, in the same semester, with another course. Some schools and colleges may allow students to complete co-requisites before enrolling in a concurrent course.

Restrictions

Restricted to a specific population (i.e. Restricted to MUSC majors, Restricted to junior standing, etc.).

Repeat

A course students may have re-enrolled in after completing the same course with a D- or higher. If a student has already earned credit for a course and chooses to re-enroll in the same course, the student usually will not earn credit again. Some courses are repeatable for credit up to a limit set by the school or college ("special topics" courses where the topics differ, private music lessons, or musical performance courses).

Semester/Term Withdrawal

Dropping all courses within a specific semester or term. When students withdraw from all courses, each course earns a grade of "W," which will be reflected on the student's transcript, but does not affect their GPA. A term withdrawal note is also reflected separately on the transcript.

Transcript

An official record of courses taken and grades earned.

Upper Division Courses (3000 & 4000 level)

Advanced academic courses designed for juniors and seniors.

Waitlist

A term commonly seen during registration periods. Students hoping to enroll in a full class can opt to be placed on a waitlist. This essentially saves a place in line in case spots open up from registered students dropping.

Waitlist Purge

The process of removing all students from the waitlist according to the date defined on the Academic Calendar.

Academic Policies and Procedures

- Academic Standing for Undergraduates (p. 109)
- Attendance Policy (p. 110)
- Course Repeat Policy (p. 110)
- Fresh Start Policy (p. 110)
- Grade Forgiveness (p. 110)

For specific academic policies for each school or college, please visit their catalog page:

- Business School (p. 130)
- College of Architecture and Planning (p. 188)
- College of Arts & Media (p. 208)
- College of Engineering, Design & Computing (p. 293)
- College of Liberal Arts & Sciences (p. 373)
- School of Education & Human Development (p. 876)
- School of Public Affairs (p. 966)
- CU Denver Honors Programs (p. 1002)

Additional academic policy information for each school/college can also be found in the Records and Registration (p. 55) section of the catalog.

For information regarding University and Campus wide policies, please click here (p. 30).

Academic Standing for Undergraduates

This policy defines four levels of academic standing and identifies rules that apply to undergraduate students based on their academic standing. Undergraduate students at CU Denver are expected to maintain progress toward their degree program, as defined by being on “Good Academic Standing.” Good Academic Standing requires minimally a cumulative grade point average (GPA) of 2.000 on University of Colorado course work.

While it is normal for some students to experience academic difficulty and drop below the good academic standing threshold for a period of time, it is important to return to good academic standing as soon as possible. Maintaining Good Academic Standing status is important because eligibility for enrollment, financial aid, and other aspects of university life can be affected if a student's cumulative GPA falls below 2.000. Students cannot graduate with an undergraduate degree from CU Denver with a cumulative GPA below 2.000. Many campus resources (p. 112) exist to help students get back on track, engage in meaningful learning experiences, and graduate.

To review the **Academic Standing for Undergraduates** policy (#7016) in full, please click here (https://www.ucdenver.edu/policies/).

Good Academic Standing

Students at the University are expected to maintain progress in their degree program, as defined by being on “good academic standing.” Good academic standing requires a minimum cumulative grade point average (GPA) of 2.000 on University of Colorado course work.

Academic Warning

If a student's cumulative CU GPA falls below 2.000 in any given semester, the student will be placed on "Academic Warning."

- Students are notified of their Academic Warning standing by university e-mail.
- An academic standing hold is placed on a student’s account every semester until their cumulative GPA is raised to 2.000 or higher.
- Academic Warning entails:
  - Completion of the Academic Support Module (ASM). The ASM is an online module designed to support to support students’ academic progress. Students will receive a link to access the ASM in their Academic Warning notification e-mail.
  - By completing the module, students learn about various support services available through CU Denver and the Auraria Campus such as financial aid, tutoring, career exploration services, veteran student services, writing support services, the Auraria Library, the Office of International Affairs, and many others. They also learn about the requirements, tools, and strategies for getting back on Good Academic Standing.
  - Students are strongly encouraged to meet with their academic advisor. (https://www.ucdenver.edu/student/advising/undergraduate/#AdvisingUnits)
  - Students must complete the ASM prior to registering for the next semester.
  - Students must earn a semester GPA of 2.000 in their subsequent semester(s), including summer session, regardless of the number of credit hours attempted, until their cumulative GPA is raised to 2.000 or higher.
- Students have five attendance semesters or 30 credit hours to improve their cumulative CU GPA to 2.000.
- Once a student’s cumulative GPA reaches 2.000 or better, the student is considered to be in Good Academic Standing. Registration or advising holds related to Academic Standing will be removed.
- If a student is unable to achieve a semester GPA of 2.000 or better while on Academic Warning in any given semester, the student will be placed on Academic Monitoring.

Academic Monitoring

If a student on Academic Warning is unable to achieve a 2.000 minimum semester GPA, the student will be placed on “Academic Monitoring.”

- An appointment with the student’s academic advisor (https://www.ucdenver.edu/student/advising/undergraduate/#AdvisingUnits) is required.
- Students on Academic Monitoring are restricted to maximum course loads for subsequent semesters until their cumulative GPA is at or above 2.000.
  - For spring and fall semesters, students can enroll in up to 13 credit hours and wait list for up to 6 credit hours (for a combined total of 19 credit hours) before wait lists are eliminated. Once wait lists are eliminated, the maximum number of enrolled credits for the semester is restricted to 13 credits.
  - For summer semester, students can enroll in up to 7 credit hours and wait list for up to 4 credit hours (for a combined total of 11 credit hours) before wait lists are eliminated. Once wait lists are eliminated, the maximum number of enrolled credits for the semester is 7 credits.

- Students on Academic Monitoring must achieve a 2.000 semester GPA in their subsequent semester(s).
- Students remain on Academic Monitoring until they achieve a cumulative GPA of 2.000 or higher or are academically suspended.

International status students may have additional restrictions and should contact the Office of International Affairs ***(***https://www.ucdenver.edu/offices/international-affairs/about/contact-address-information/***) for additional information and guidance.***

Academic Suspension

If a student on Academic Monitoring is unable to achieve a 2.000 minimum semester GPA, the student will be placed on "Academic Suspension".

- Students are notified via university e-mail when they are placed on Academic Suspension.
- Suspension entails:
  - Students are unable to attend the University of Colorado Denver, or any University of Colorado campus, for one year/three semesters (including summer session).
  - To prepare for readmission, students can either attend another institution and demonstrate improved academic performance (minimum GPA at another institution must be 2.750) **or** use the time off to address issues directly contributing to their academic difficulties.
- Students may petition the individual college's (https://www.ucdenver.edu/student/advising/undergraduate/#AdvisingUnits) appellate committee for readmission after the required one year/three semester suspension period. It is recommended that students apply early to allow time for adequate review.
- For readmission, students must meet and document at least one of the following criteria:
  - Attendance at another regionally accredited college/university wherein they completed a minimum of 12 transferable credit hours that are applicable to their degree, with a cumulative GPA of at least 2.750.
  - Provide an explanation in writing of their previous academic difficulty, demonstrate what has changed, and how readmission will allow them to achieve and maintain good academic standing.
- If a student is granted readmission, they will be readmitted on Academic Monitoring and must meet the conditions of Academic Monitoring as described above.

Attendance Policy

Successful performance in college courses is dependent upon regular student attendance and participation. It is the university's expectation that students will participate in every class, independent of whether attendance is formally part of the course grade. The university recognizes there will be occasions when students must miss classes that contain examinations, graded assignments, experiments or projects, and general class participation. The university policy website further addresses the issues of student absences, identifies possible accommodations, and outlines both faculty and student responsibilities.

The university also recognizes that excessive excused absences will make it impossible to evaluate a student's performance in a class based on attendance and participation or in a class with multiple missed graded assignments. Under these circumstances, an administrative solution should be explored with the student to drop the course(s) before the end of the semester.

To review the policy in full, please click here (https://www.ucdenver.edu/policies/) and search policy number 7030.

School/College Specific Policy

BUSINESS SCHOOL (p. 134)
COLLEGE OF ARCHITECTURE AND PLANNING (p. 190)
COLLEGE OF ARTS & MEDIA (p. 211)
COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 296)
SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT (p. 878)

Course Repeat Policy

Though students may take any course more than once, credit toward graduation is counted only once for a typical course, unless otherwise noted in the course description. Some types of courses (e.g. Internships, Independent Studies, etc.) may be repeatable for applicable credit within a certain range of total semester hours. See course descriptions for the max semester hours applicable from each course.

School/College Specific Policy

BUSINESS SCHOOL (p. 134)
COLLEGE OF ARCHITECTURE AND PLANNING (p. 190)
COLLEGE OF ARTS & MEDIA (p. 211)
COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 296)
COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)
SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT (p. 878)

Fresh Start Policy

This policy allows undergraduate students who left CU Denver with a cumulative transcript GPA of below 2.0 the opportunity to return for a second chance with a recalculated GPA. To qualify, students must have been previously enrolled at CU Denver and left for at least one calendar year (three semesters). At the time of departure, students must be in good standing in terms of academic honesty and/or student conduct matters.

To review the policy and complete list of qualifications in full, please click here (https://www.ucdenver.edu/policies/) and search policy number 7040.

Note: Students who are readmitted under the Fresh Start policy are no longer eligible to replace grades through the Grade Forgiveness policy.

Grade Forgiveness

Degree-seeking undergraduate CU Denver students pursuing their first degree at CU Denver may request to forgive a grade from a prior instance of taking a 1000-level or 2000-level CU Denver class if they received a D+, D, D-, or F in the prior attempt. Course retaken must be an exact match for the previous attempt. Ineligible courses include special topics, repeatable courses, course grades received from academic dishonesty, mismatched credit hours, and equivalent cross-listed courses. Courses repeated for grade forgiveness must be taken for a letter grade (not audit, satisfactory/unsatisfactory, no credit). Limited to one attempt per course, up to a maximum of 18 credit hours.

Grade forgiveness deadlines can be found in the Academic Calendar (https://www.ucdenver.edu/student/registration-planning/academic-calendars/). The highest grade becomes the final grade that calculates in the GPA.

If a student drops the class for which grade forgiveness was requested, the grade forgiveness request will automatically be cancelled on the student's behalf. If the student later re-enrolls in the same or different section of the same course, they will need to re-submit the grade forgiveness request form.

Notes:

Students may repeat courses throughout their academic career without invoking grade forgiveness. When courses are repeated without invoking grade forgiveness, all attempts are included in student credit and GPA totals calculations, and some programs limit the number of course repeats.

Students who have opted into the Fresh Start program are not eligible for Grade Forgiveness.

To review the policy in full, please click here (https://www.ucdenver.edu/policies/) and search policy number 7037.

Undergraduate Advising and Other Student Services

The CU Denver academic advising community recognizes the importance of having access to accurate information and support when you need it.

We can help you connect with your advisor, find the most updated degree maps, and understand university academic policies. Advisors assist students, navigate and personalize their college experience, connect them with the right resources, and guide them along their entire academic journey.

This information and the resources in Undergraduate Academic Advising (https://www.ucdenver.edu/student/advising/undergraduate/) are designed for students in **undergraduate programs**.

- Center for Undergraduate Exploration and Advising (p. 115)
- College of Architecture and Planning Academic Advising (p. 116)
- College of Arts & Media Advising and Student Services (p. 116)
- College of Engineering, Design and Computing Academic Advising (p. 116)
- College of Liberal Arts & Sciences Academic Advising (p. 117)
- CU Denver Business School Undergraduate Advising (p. 119)
- School of Education and Human Development Academic Services (p. 120)
- School of Public Affairs Academic Advising (p. 120)

In addition to our advising services, CU Denver offers other valuable resources for our Undergraduate Students to help you navigate your time here at CU Denver. Below are just some of the offices that provide those services. Additional support and services can be found here (p. 19).

Center for Pre-Collegiate and Academic Outreach Programs

Location: North Classroom 4032
Phone Number: 303-315-7070
Email: pcdp@ucdenver.edu
Website: https://www.ucdenver.edu/pre-college-programs (https://www.ucdenver.edu/pre-college-programs/)

The Center for Pre-Collegiate and Academic Outreach Programs at the University of Colorado Denver currently houses unique and distinct outreach programs. These programs are designed to educate, motivate, and prepare first-generation students to be successful in secondary and post-secondary education with the ultimate goal of obtaining a higher education degree.

Early Action (EA)

EA Contact: Erika Larson
Phone: 303-315-5280
Email: success.initiatives@ucdenver.edu

Early Action is a referral-based student support program for faculty and staff to communicate and triage students to resources on campus that provide academic and administrative support. Early Action is one of the ways we support our students. It's an opportunity for instructors to communicate with students about resources on campus that can help support success in the course. It is a process that opens up the conversation between students, faculty and support staff so that together we can develop strategies for students to achieve their goals in courses and beyond.

Succeeding at college does not mean that you don't struggle in a class or classes or during particular semesters. Our goal at CU Denver is to do all we can to support every student and facilitate their success. From the first to tenth week of the semester, you may get an email or phone call from a CU Denver staff member offering assistance and opportunities for academic support. Please engage in this process. Getting an Early Action communication is not an indication that you will not succeed in the course. It is a call to action. Students who have taken advantage of resources offered to them are able to move forward and succeed in the course.

Learning Resources Center

Location: Learning Commons, Suite 1231
Phone: 303-315-3531
Email: tutorialservices@ucdenver.edu
Website: https://www.ucdenver.edu/learning-resources-center/home (https://www.ucdenver.edu/learning-resources-center/home/)

The CU Denver Learning Resources Center is designed to promote student success, retention, and graduation in a supportive, vibrant and inclusive academic setting. The LRC provides several different services catering to every student's specific learning requirements. Offering both in-person and virtual learning options, each service provided by the Learning Resources Center is available at no additional cost for fee-paying CU Denver students.

New Student Orientation

Location: Learning Commons, Suite 2206
Phone: 303-315-3503
Email: orientation@ucdenver.edu
Website: https://www.ucdenver.edu/orientation (https://www.ucdenver.edu/orientation/)

New Student Orientation (NSO) welcomes all incoming Lynx and their families, by creating a supportive, inclusive and encouraging environment. NSO assists our diverse student population by ensuring a smooth transition through the academic, personal and social adjustments to life at CU Denver. Our programs are dedicated to helping students exceed their own expectations through graduation, all the while creating a community at CU Denver that feels like home.

Orientation is required for on-campus, degree seeking, first-year and transfer students.

Office of Academic Achievement

Associate Vice Chancellor for Student Success: Margaret C. Wood, PhD
Phone: 303-315-2133
Email: margaret.c.wood@ucdenver.edu
Website: ucdenver.edu/ue (http://www.ucdenver.edu/ue/)

The **Office of Academic Achievement** promotes the creation of high-quality learning experiences in and out of the classroom. We support faculty as they create courses that help students learn, persist, and ultimately graduate. We serve students by providing support for their academic endeavors through advising, tutoring, peer mentoring, and tools for classroom success. We also provide opportunities for enhanced student engagement through research, honors coursework, first-year experiences, and leadership training. From orientation through graduation our programs help students achieve their academics

goals, setting them up for success at CU Denver and beyond. The Office of Academic Achievement includes the following areas: Student Transitions & Family Engagement, University Honors & Leadership, Learning Resources Center, Undergraduate Research & Creative Activities, Undergraduate Advising, and the Center for Excellence in Teaching & Learning.

High Impact Practices (HIPs)

HIPs are specialized practices or programs of engaged teaching and active learning. Ten specific HIPs are recognized nationally: First-Year Seminars, Common Intellectual Experiences, Learning Communities, Writing-Intensive Courses, Collaborative Assignments and Projects, Undergraduate Research, Diversity/Global Learning, Service Learning and Community-Based Learning, Internships, and Capstone Courses and Projects. National research shows that student participation in HIPs increases engagement, retention, and completion, especially in the case of underrepresented groups.

First-Year Experiences (FYE)
Location: Learning Commons Room 2206
Phone Number: 303-315-5499
Email: fye@ucdenver.edu
Website: ucdenver.edu/fye (http://www.ucdenver.edu/fye/)

The focus of the CU Denver First-Year Experiences program is specially-designed courses that provide a welcoming and supportive learning environment for our new degree-seeking students who are starting college for the first time in the fall semester. In any of the FYE courses they choose, First-Year students acclimate to the rigors of college-level work, engage in the active social and intellectual life of our campus, work closely with faculty and peer leaders, and make close friends and study partners. By extending our support beyond the classroom, we connect our new students to the university and help them navigate this new academic world.

Internships & Experiential Learning Center:
Senior Director of Student Career Development: Sarah Trzeciak
Location: Tivoli Student Union Annex, Suite 439
Phone: 303-315-7318
Email: sarah.trzeciak@ucdenver.edu
Website: ucdenver.edu/elc (http://www.ucdenver.edu/elc/)

Housed under the Student Community and Engagement umbrella, Experiential learning includes a variety of activities with one common goal-to immerse students in hands-on learning outside the classroom where experience is at the heart of the learning process. The **Experiential Learning Center**, located within the SCE division, is committed to working closely with students, faculty, employers, and community partners to provide quality experiential learning opportunities that enhance academic learning, integrate theory and practice, and promote professional development and active citizenship. The ELC offers resources for internships, undergraduate research, and professional development experiences.

Global Learning | Study Abroad
Location: Tivoli Student Union Annex, Suite 339
Phone: 303-315-2001
Email: study.abroad@ucdenver.edu
Website: https://www.ucdenver.edu/students/study-abroad (https://www.ucdenver.edu/students/study-abroad/)

The Office of Global Education / Study Abroad provides academically and professionally relevant international experiences to a diverse student population at the University of Colorado Denver | Anschutz Medical Campus. These experiences equip students with cross-cultural skills necessary to succeed in an interconnected global society. The Office of Global Education is committed to providing students with a wide range of engaging and affordable study, internship, research, and clinical opportunities.

International program offerings vary to meet the needs and interests of all students. These programs are open to undergraduate, graduate, and international students; it is not necessary to be a particular major to participate. Program lengths range from two weeks to an academic year or more. The vast majority of programs do not require language proficiency beyond the English language.

The Office of Global Education strives to keep study abroad programs affordable. In most cases, students are able to utilize financial aid and are eligible for an array of internal and external scholarships. For the most current information on programs, policies, and funding, please visit the Office of Global Education website at https://www.ucdenver.edu/students/study-abroad (https://www.ucdenver.edu/students/study-abroad/) or visit LynxConnect in the Tivoli.

Peer Advocate Leader (PAL) Program

Location: Learning Commons Room 2206
Phone Number: 303-315-5492
Email: PAL@ucdenver.edu
Website: https://www.ucdenver.edu/first-year-experiences/peer-advocate-leaders (https://www.ucdenver.edu/first-year-experiences/peer-advocate-leaders/)

PAL stands for Peer Advocate Leaders. We serve as peer mentors to help students navigate a successful college career. PALs are trained to work with students to connect them with CU Denver, the Auraria Campus, and the Denver Community. The mentoring relationship in the PAL is designed to foster student engagement and academic success by providing peer-level support that promotes student achievement, growth, and learning through the student's career at CU Denver. PALs are paired in First-Year Experience courses to plan and facilitate educational and social activities. PALs also assist students in one-on-one environments.

If you would like to apply to become a Peer Advocate Leader, applications are live every Spring semester for the upcoming academic year. Please visit MyLynx to complete the application or visit the PAL website for more information.

Student Government Association

Location: Tivoli Student Union 301
Phone Number: 303-315-7286
Email: sga@ucdednver.edu
Website: https://www.ucdenver.edu/student-life/student-government (https://www.ucdenver.edu/student-life/student-government/)

The Student Government Association serves as a voice for students. Similar to the structure of the U.S. Government, SGA has executive, legislative and judicial branches. Executives, Senators, College Council Members, and SACAB representatives are elected each year in the spring semester. SGA assists students with information concerning student clubs and organizations, campus events, issues concerning student status and other information of general interest to students. SGA also provides student assistance with grievances and the opportunity to become more closely involved with the university community through

active participation in student government itself or through service on university, tri-institutional and Auraria committees.

Reserve Officers Training Corps (ROTC)

The Air Force, Navy/Marines, and Army offer college students the opportunity to receive a commission as an officer through the Reserve Officers Training Corps (ROTC) program. These military training programs occur in conjunction with a student's undergraduate coursework and lead to a commission upon graduation. All ROTC programs offer competitive scholarships, allow for elective academic credit depending on policies of the student's home school or college, and include a commitment to military active or reserve duty.

The University of Colorado Denver actively supports students desiring to participate in one of the ROTC programs and provides registration access to Army ROTC (sponsored by the Metropolitan State University of Denver) and to Navy/Marines or Air Force ROTC (sponsored by the University of Colorado Boulder).

Interested students should contact the specific ROTC program directly for military training, scholarship information, and registration details.

Air Force ROTC
AFROTC Detachment 105
University of CO Boulder
UCB 371
Boulder, CO 80309-0371
Phone: (303) 492-3128; (303) 492-8352

Navy/Marines ROTC
Naval ROTC
University of CO Boulder
UCB 374
Boulder, CO 80309-0374
Phone: (303) 492-2576

Army ROTC
Dept. of Military Science
633 Curtis Street
Modular Building MO-1
Denver, CO 80217
Phone: (303) 352-7419

Transfer students enrolled in Army, Air Force, or Navy/Marines ROTC programs should consult with their school or college regarding the application of ROTC course credit toward graduation requirements.

Math Pathways

The choice of the right type and level of Math is crucial for student success. CU Denver highly recommends that all students take Math in their first or second semester.

All undergraduate students must complete a Core Mathematics course to fulfill the university's graduation requirement. There are currently five different mathematics pathways which are available for students. Students should consult with their advisor (https://www.ucdenver.edu/student/advising/undergraduate/) and degree map (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/) to select which pathway is best for them.

- **Quantitative Literacy Pathway**
  - MATH 1010 Mathematics for the Liberal Arts
  - **Please note**: In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT score less than 520) and a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 1011 Math for Liberal Arts Workshop.
- **Business Mathematics Pathway**
  - MATH 1060 Finite Mathematics
- **STEM Pathway** (one of the following options)
  - MATH 1108 Stretch College Algebra-Part 1 / MATH 1109 Stretch College Algebra-Part 2
  - MATH 1110 College Algebra
  - MATH 1120 College Trigonometry
  - MATH 1130 Precalculus Mathematics
  - MATH 1401 Calculus I
- **Please note:** If you plan on taking MATH 1110 College Algebra, MATH 1120 College Trigonometry, MATH 1130 Precalculus Mathematics or MATH 1401 Calculus I you will need to complete ALEKS Math Placement. Click here (https://www.ucdenver.edu/docs/librariesprovider122/undergraduate-academic-advising/pre-advising-day-communications/aleks-informational-guide-2020-2021.pdf?sfvrsn=510b45ba_0) for more information.
- **Statistics Pathway**
  - MATH 2830 Introductory Statistics
    - **Please note:** In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT score less than 520) and a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 2831 Introductory Statistics Workshop.
- **Elementary/Middle School Teacher Mathematics Pathway**
  - MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis

Students should consult with their advisor and major graduation requirements to select which math pathway is best for them.

For more detailed information please see the descriptions below:

Quantitative Literacy Pathway

MATH 1010 Mathematics for the Liberal Arts is the recommended entry-level math course for all degrees within the Arts and the Humanities, including but not limited to majors in Art History, English, Film & Television, History, Modern Languages, Music, Philosophy, and Visual Arts.

To support student success in this course, a co-requisite class, MATH 1011 Math for Liberal Arts Workshop is available for students to take alongside MATH 1010 Mathematics for the Liberal Arts. Students with a High School GPA less than 3.25 and an ACT score less than 19 (equivalent SAT less than 520) are required to register for this 1-credit hour workshop along with their MATH 1010 course.

Business Mathematics Pathway

MATH 1060 Finite Mathematics is the recommended entry-level math course for students in different business tracks.

STEM Pathway

MATH 1108 Stretch College Algebra-Part 1 and MATH 1109 Stretch College Algebra-Part 2; MATH 1110 College Algebra; MATH 1120 College Trigonometry; MATH 1130 Precalculus Mathematics or MATH 1401 Calculus I are the recommended entry-level math courses for all degrees within the Applied, Natural and Physical Sciences, including but not limited to majors in Architecture, Biology, Chemistry, Engineering, Mathematics and Physics. Many health careers also require these mathematics courses.

Since student success is one of our goals, students will most likely need to complete a math placement assessment from the "ALEKS Placement, Preparation and Learning" program prior to registering, to determine which level the student is best prepared to enter.

ALEKS PPL guides appropriate mathematics placement and registration, in addition to providing students an opportunity to review material and gain confidence in their math skills. Students may take the ALEKS PPL assessment up to five times, and the highest score is the one that will count as a prerequisite for registering for classes. Using ALEKS PPL, the learning modules that are provided in response to assessment results and advising resources, can lead students to success in the first semester of math and save valuable tuition dollars. Students in this pathway should use these tools to help them succeed.

- The assessment typically takes 60-90 minutes with approximately 30 questions.
- Students should complete ALEKS PPL assessment before orientation and/or registration so they are eligible to register for Math before they leave that day.
- It's important to be honest while taking the placement assessment.

Students must complete the assessment with the score from the chart below for the corresponding course. The only course that is open to all students in this pathway that does not require assessment is MATH 1108 Stretch College Algebra-Part 1 and MATH 1109 Stretch College Algebra-Part 2

Course #	Course Name	ALEKS Score Range	Prior Coursework Requisite (alternative to assessment
MATH 1108 & MATH 1009	Stretch College Algebra	No ALEKS assessment is required	Students must complete both MATH 1108 and MATH 1109 to earn Core mathematics credit and to fulfill the prerequisite for MATH 1120
MATH 1110	College Algebra	46 or higher	NA
MATH 1120	College Trigonometry	61 or higher	MATH 1109 or MATH 1110 with a C- or higher
MATH 1130	Pre-Calculus	61 or higher	NA
MATH 1401	Calculus I	76 or higher	MATH 1109 or MATH 1110 and MATH 1120 with a C- or higher or MATH 1130 with a C- or higher

If students already have math college credit from AP/IB/CLEP exam or a concurrent enrollment course, CU Denver will recognize that once we receive official test scores and/or transcripts. This previous coursework (AP/IB/CLEP/concurrent enrollment) may shift your eligibility to enroll in a higher level math course, but ALEKS will still help to give you the most current reflection of your level of preparation and help inform and guide your math selection.

Statistics Pathway

MATH 2830 Introductory Statistics is the recommended entry-level math course for all degrees within the Social, Behavioral, Educational and Integrated Sciences, including but not limited to majors in Anthropology, Communication, Education, Ethnic Studies, Geography and Environmental Sciences, International Studies, Political Science, Psychology, Public Administration, Public Health and Sociology.

To support student success in this course, a co-requisite class, MATH 2831 Introductory Statistics Workshop is available for students to take alongside MATH 2830 Introductory Statistics. Students with a High School GPA less than 3.25 and an ACT score less than 19 (equivalent SAT less than 520) are required to register for this 1-credit hour workshop along with their MATH 2830 Introductory Statistics course.

Elementary/Middle School Teacher Mathematics Pathway

MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis, is the recommended entry-level math course for students in education tracks pursuing elementary or middle school licensure.

Questions? Contact MATH.Placement@ucdenver.edu or your academic advising unit (https://www.ucdenver.edu/student/advising/undergraduate/).

Advising

Academic advising at CU Denver is as diverse as the students that learn here. Each system is designed to engage students' academic choices, interests, and exploration. There is no main advising center. Advising for undergraduate and graduate students is primarily organized within the seven academic CU Denver schools and colleges. The Center for Undergraduate Exploration and Advising (CUE&A) is an additional resource for undergraduate students.

For additional information about advising, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/).

- Center for Undergraduate Exploration and Advising (p. 115)
- College of Architecture and Planning Academic Advising (p. 116)
- College of Arts & Media Advising and Student Services (p. 116)
- College of Engineering, Design and Computing Academic Advising (p. 116)
- College of Liberal Arts & Sciences Academic Advising (p. 117)
- CU Denver Business School Undergraduate Advising (p. 119)
- School of Education and Human Development Academic Services (p. 120)
- School of Public Affairs Academic Advising (p. 120)

Center for Undergraduate Exploration and Advising

Location: Student Commons Building, Suite 1113
Phone Number: 303-315-1940
Email: cuea@ucdenver.edu
Website: http://ucdenver.edu/life/services/asac/Pages/default.aspx

The Center for Undergraduate Exploration & Advising is a resource for students still exploring major and career pathways at CU Denver. We welcome students who are still deciding on a major, planning to change their major, and/or looking to supplement their current major with a minor or certificate program. In addition to being a general resource for exploratory students, the CUE&A Success Advisors serve as primary Success Advisors for:

- College of Liberal Arts & Sciences (CLAS) Undeclared Students
- First-year Students (under 30 credits) in the College of Arts & Media (CAM)
- Undergraduate Non-Degree Students

We also invite prospective students needing a general overview of the many academic and major opportunities at CU Denver to meet with a CUE&A Success Advisor.

College of Architecture and Planning Academic Advising

Location: CU Denver Building, 1250 14th St Ste 200
Phone Number: 303-315-1000
Email: CAP.UGAdvising@ucdenver.edu
Website: https://architectureandplanning.ucdenver.edu/architecture/academics/academic-advising#advisors (https://architectureandplanning.ucdenver.edu/architecture/academics/academic-advising/#advisors)

Overview

Our Mission

The College of Architecture and Planning student services team aims to foster student success by offering a welcoming environment, where students are provided tools and resources that will empower them to make decisions leading to the highest level of academic, career, and personal achievement.

To accomplish our mission, the student services staff in the College of Architecture and Planning will:

- Assist students in the development of meaningful education plans.
- Serve as a resource for students to provide timely, accurate information and professional advice about degree programs, university policies and procedures, campus resources, and student engagement opportunities.
- Support and advance the recruitment, admission, and enrollment of students to the College.
- Encourage self-reliant problem-solving.
- Empower students to take responsibility for achieving their academic, career, and personal goals.
- Assist students in their transition and integration into college/the College.
- Forster community at the College and University level.
- Collaborate with faculty to ensure accurate curricular information is communicated to both current and prospective students.
- Help students build professional networks and skills in their field through participation in Internship and Mentorship programs.

College of Arts & Media Advising and Student Services

Location: Arts Building, Suite 177
Phone Number: 303-315-7400
Email: CAMadvising@ucdenver.edu
Website: https://artsandmedia.ucdenver.edu/

Hours of Operation: M-F 8:00 a.m.-5:00 p.m

Overview

Advising and Student Services at the College of Arts & Media (CAM) provides current and prospective CAM students with academic information about the college and university. CAM advisors assist students with tracking their academic progress, discussing remaining requirements and course sequencing and by offering appropriate referrals to faculty and other university services (e.g., career resources). Advisors also coordinate academic email notifications to students (e.g., add/drop deadlines and applying to graduate), as well as maintaining advising-related materials. While students are encouraged to make use of the service of academic advising throughout their college career, they are ultimately responsible for their own academic progress.

Academic advising may be mandated or suggested prior to registration depending on the student's status. Students can view registration holds in the Student Center of their UCDAccess account.

First-Year and Transfer Students

First-Year students with fewer than 30 credit hours are required to participate in New Student Orientation and meet with an advisor before registering for their first semester, and then later are required to meet with an advisor in the Center for Undergraduate Exploration and Advising (CUE&A) before registering for their second semester. Transfer students with 30 or more credit hours are required to meet with a CAM academic advisor and may also be required to complete an orientation prior to registering for their first semester of courses.

Continuing Students

Students with declared majors who have completed at least 30 semester hours are assigned to CAM Advising and Student Services. Students are encouraged to connect with an advisor at least once per year and provide a suggested schedule for each advising appointment.

Students approaching their junior and senior years are encouraged to meet with a faculty mentor in their area of study or academic advisor to discuss internships, career/employment opportunities, graduate school, professional organizations and other post-graduation information. Additional resources exist in CAM and across campus to support career exploration. Students may contact CAM Advising and Student Services for details.

College of Engineering, Design and Computing Academic Advising

Main Office Information
Location: North Classroom, 1200 Larimer Street, Room 3034
Phone Number: 303-315-7170
Email: engineering@ucdenver.edu

Website: engineering.ucdenver.edu/current-students/academic-advising (https://engineering.ucdenver.edu/current-students/academic-advising/)

Overview

Students in the College of Engineering, Design and Computing meet with an academic advisor every semester. Students admitted into an engineering major meet with an advisor in their engineering major/interest department. Students admitted to the pre-engineering program meet with our pre-engineering advisor.

Check your student portal if you are unsure of the program you have been admitted to. For questions or to schedule advising appointments, please contact our academic advisors by email or phone.

Department Advising Contact Information

Bioengineering

Location: Refer to website (https://engineering.ucdenver.edu/academic-advising/)
Phone Number: 303-315-7576
Email: bioengineering@ucdenver.edu
Website: engineering.ucdenver.edu/academics/departments/bioengineering/contact-the-department-of-bioengineering (https://engineering.ucdenver.edu/academics/departments/bioengineering/contact-the-department-of-bioengineering/)

Civil Engineering

Location: North Classroom, 1200 Larimer Street, Room 2506
Phone Number: 303-315-7160
Email: civilengineering@ucdenver.edu
Website: engineering.ucdenver.edu/academics/departments/civil-engineering/contact-us (https://engineering.ucdenver.edu/academics/departments/civil-engineering/contact-us/)

Computer Science

Location: Lawrence Street Center, 1380 Lawrence Street, 8th floor
Phone Number: 303-315-1480
Email: computerscience@ucdenver.edu
Website: engineering.ucdenver.edu/academics/departments/computer-science-and-engineering/contact-us (https://engineering.ucdenver.edu/academics/departments/computer-science-and-engineering/contact-us/)

Electrical Engineering

Location: North Classroom, 1200 Larimer Street, Room 2615
Phone Number: 303-315-7520
Email: electrical@ucdenver.edu
Website: engineering.ucdenver.edu/academics/departments/electrical-engineering/contact-us (https://engineering.ucdenver.edu/academics/departments/electrical-engineering/contact-us/)

Mechanical Engineering

Location: North Classroom, 1200 Larimer Street, Room 2024
Phone Number: 303-315-7500
Email: mechanical@ucdenver.edu
Website: engineering.ucdenver.edu/academics/departments/mechanical-engineering/contact-us (https://engineering.ucdenver.edu/academics/departments/mechanical-engineering/contact-us/)

Pre-engineering

Location: North Classroom, 1200 Larimer Street, Room 3034
Phone Number: 303-315-7170
Email: engineering@ucdenver.edu
Website: engineering.ucdenver.edu/academics/undergraduate-programs/pre-engineering-program/contact-us (https://engineering.ucdenver.edu/academics/undergraduate-programs/pre-engineering-program/contact-us/)

College of Liberal Arts & Sciences Academic Advising

Location: North Classroom, Room 1030
Phone Number: 303-315-7100
Email: CLAS_advising@ucdenver.edu
Website: https://clas.ucdenver.edu/advising/

CLAS Academic Advising Overview

The CLAS Academic Advising team includes academic advisors and administrative professionals who partner with faculty and program advisors across the College to serve and support all prospective, newly-admitted, and continuing undergraduate students with a declared CLAS major or program. To learn more about our team, vision, values, goals, and student learning outcomes for academic advising, visit our About Us (https://clas.ucdenver.edu/advising/about-us/clas-advising-mission-vision-values-goals-and-student-learning-outcomes/) page.

CLAS Academic Advising Mission

The CLAS Academic Advising team creates and sustains an inclusive, safe, and supportive learning environment where students are empowered to build meaningful relationships and skills that foster lifelong learning and success.

CLAS Academic Advising System

Academic advising in the College of Liberal Arts and Sciences (CLAS) is a partnership between students, staff, and faculty. CLAS utilizes a shared advising system, which means all undergraduate students in a declared CLAS major or program will have at least two academic advisors with whom they should work throughout their time at CU Denver: a CLAS Academic Advisor and a CLAS Faculty/Program Advisor. Students with a declared pre-health program course of study also benefit from the additional support and expertise of a Health Professions Advisor. The following details the important contributions and expectations of CLAS Academic Advisors, CLAS Faculty/Program Advisors, and CLAS Students in the shared advising relationship.

CLAS ACADEMIC ADVISORS

CLAS students can identify their assigned CLAS Academic Advisor by clicking on the student profile icon toward the top, right side corner of their UCD Access homepage. A student's CLAS Academic Advisor will be listed under the "Advisor" section in their student profile.

CLAS Academic Advisors:

- Advise on and help students track their progress with general graduation, CU Denver Core Curriculum, and CLAS graduation requirements
- Explain and support students with the knowledge they need to navigate#CU Denver and CLAS systems, policies, procedures, and deadlines
- Teach students to use advising and academic planning tools, including the Degree Audit and Planner, to create academic

plans, make informed decisions about course registration, and track their degree progress
- Support students in navigating important university and college processes, including transfer credit evaluation and graduation
- Provide information#about and help students connect with campus and community resources
- Promote students' sense of belonging by sharing information about meaningful engagement and involvement opportunities
- Advocate for and empower students to achieve their personal, academic, and professional goals

CLAS Faculty/Program Advisors

CLAS Faculty/Program Advisors include major, minor, or certificate program advisors. CLAS Faculty/Program Advisors are not assigned in UCD Access as they are designated by program. Students can find a list of designated CLAS Faculty/Program Advisors on the CLAS Faculty Advisors (https://clas.ucdenver.edu/advising/about-us/faculty-advisors/) page.

CLAS Faculty/Program Advisors:

- Advise on and help students track their major, minor, or certificate program requirements
- Evaluate transfer credits and their applicability to major, minor, or certificate program requirements
- Confirm students' completion of major, minor, or certificate program requirements in preparation for graduation
- Help connect students to program-specific experiences or opportunities, including internships, directed research, independent studies, faculty-led study abroad programs, service learning, or capstone projects
- Engage students to explore career and graduate school opportunities and resources
- Refer students to relevant campus and community resources
- Advocate for and empower students to achieve their personal, academic, and professional goals

CLAS Students

- Learn and track their progress with general graduation, CU Denver Core Curriculum, CLAS Graduation, and major, minor, or certificate program requirements
- Connect at least once a semester with all academic advisors, including CLAS, Faculty/Program, and Health Professions Advisors
- Know and follow CU Denver and CLAS policies, procedures, and deadlines
- Use advising and academic planning tools, including the Degree Audit and Planner, to prepare for academic advising, make informed decisions about academic plans and course registration, and track degree progress
- Identify personal, academic, and professionals goals with the support of academic advisors and campus partners
- Ask for help and use relevant campus and community resources

Health Careers and Professions Advising

Director/Advisor: Trishia Vasquez
Telephone: 303-315-7541
Undergraduate Pipeline Program Coordinator/Advisor: Ken English
Telephone: 303-315-7542
Main Office Email: ucdhealthcareers@ucdenver.edu
Phone: 303-315-7536

Health Career Advisors on the Denver Campus assist in planning a course of study designed to improve a student's chance of success in a health career of their choice by sharing information about career paths in the health professions, work role and environment, related careers and relevant professional development or graduate school programs. We can provide insight into career options, professional opportunities, and extracurricular opportunities to improve your chances of success in the health career of your choice, including, but not limited to: dentistry and dental hygiene, medicine, medical technology, nursing, optometry, osteopathy, pharmacy, physical therapy, physician assistant, podiatry, and veterinary medicine. A comprehensive list of health career options and additional information to help you mold your academic experience to your specific goals is available on the health professions programs website at https://clas.ucdenver.edu/health-professions-programs/.

Undergraduate Pipeline Programs

BA/BS-MD Program

The BA/BS-MD degree program at the University of Colorado Denver and Anschutz Medical Campus aims to promote the diversity of medical professionals practicing medicine in Colorado and to better serve the health care needs of the State of Colorado by assembling up to 10 outstanding students each year from broadly diverse backgrounds. Applicants must be Colorado residents and have an interest in serving the health care needs of Colorado as primary care physicians. This program is a partnership between the University of Colorado Denver College of Liberal Arts and Sciences and the University of Colorado School of Medicine.

Being accepted to the program allows students to earn a reserved spot at the University of Colorado School of Medicine provided he or she meets specific academic, non-academic, and professional requirements annually.

Admission of individuals will be conducted through a holistic review in a manner which treats each applicant fairly, on the basis of experience, attributes, and metrics. For more information, visit https://clas.ucdenver.edu/health-professions-programs/babs-md-program-information (https://clas.ucdenver.edu/health-professions-programs/babs-md-program-information/) or contact Mr. Ken English, Program Coordinator, at kenneth.english@ucdenver.edu.

BA/BS-DDS Program

The BA/BS-DDS degree program at the University of Colorado Denver and CU School of Dental Medicine at Anschutz Medical Campus aims to promote the diversity of dental professionals practicing dentistry in Colorado and to better serve the health care needs of the State of Colorado by assembling and educating up to five students each year from broadly diverse backgrounds. Applicants must be Colorado residents who are interested in serving the health care needs of Colorado as dentists. Acceptance and participation in this program does not guarantee admission to the University of Colorado School of Dental Medicine or any other dental school.

Students who successfully meet all program requirements including a successful interview with the School of Dental Medicine (SDM) Admission Committee, will be eligible for a "reserved" spot in the CU SDM matriculating class.

Admission of individuals will be conducted through a holistic review in a manner which treats each applicant fairly, on the basis of experience, attributes, and metrics.
For more information, visit https://clas.ucdenver.edu/health-professions-programs/babs-dds-program (https://clas.ucdenver.edu/health-

professions-programs/babs-dds-program/) or contact Mr. Ken English, Program Coordinator, at kenneth.english@ucdenver.edu.

BA/BS-DPT Program

The BA/BS-DPT early admission program (EAP) is divided into 2 phases:

Phase I is a pre-application process demonstrating student interest in the early admission program. Application to Phase I occurs at the completion of the first semester of baccalaureate course work. Up to 10 qualified students are accepted into Phase I each year.

Phase II is formal admittance into the EAP for students from Phase I who have completed at least 45 semester credits as an undergraduate (typically sophomore level) and demonstrated a high level of success in their initial academic coursework to be considered for this early admission opportunity. Up to 3 qualified students are accepted into Phase II each year.

This program is designed to bring a richness of diversity to the Physical Therapy Program at the Anschutz Medical Campus and the PT profession.##Diversity embraces race, ethnicity, gender, religion, socioeconomic status, sexual orientation, disability, life experiences, record of service and employment and other talents and personal attributes that can enhance the scholarly and learning environment.

Students seeking Early Admission may select any major and are encouraged to obtain a broad liberal arts education incorporating a wide range of science courses while participating in the additional educational opportunities available on the CU Denver campus. Students who meet all requirements for Phase II EAP are formally admitted to the PT Program in the final semester of their bachelor's degree curriculum after completing all requirements. For more information, visit https://clas.ucdenver.edu/health-professions-programs/pt-early-admit-program (https://clas.ucdenver.edu/health-professions-programs/pt-early-admit-program/) or contact Ms. Trishia Vasquez, Program Director, at trishia.vasquez@ucdenver.edu.

Cu DENVER/ University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences (sspps) PROGRAM

The University of Colorado, through collaborative efforts of the CU Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS) and the College of Liberal Arts and Sciences (CLAS) have launched the CU Denver/ SSPPS Pipeline Program to promote the diversity of Pharmacy health care professionals in Colorado and to better serve the health care needs of the State of Colorado. The CU Denver/SSPPS Pipeline Program is designed to be a 3+4 program consisting of 3 years of prerequisite coursework at CU Denver and 4 years of coursework within the CU PharmD Program at CU SSPPS. This Program will assemble up to 20 outstanding students each year from broadly diverse backgrounds. Applicants must be in their freshmen year of college at CU Denver (first time enrolled in college) and have an interest in serving the health care needs of Colorado as a Pharmacist.

Being accepted to the program allows students to earn a reserved spot at the CU Skaggs School of Pharmacy and Pharmaceutical Sciences provided they meet specific academic, non-academic, and professional requirements annually.

For more information, visit https://clas.ucdenver.edu/health-professions-programs/cu-denver-university-colorado-skaggs-school-pharmacy-and-pharmaceutical-sciences-pipeline-program (https://clas.ucdenver.edu/health-professions-programs/cu-denver-university-colorado-skaggs-school-pharmacy-and-pharmaceutical-sciences-pipeline-program/) or contact Ms. Trishia Vasquez, Program Director, at trishia.vasquez@ucdenver.edu.

Cu DENVER/ CU Nursing Bridge Pathway

The University of Colorado College of Nursing (CU Nursing) is proud to announce the creation of a new partnership program with the University of Colorado Denver for students interested in pursuing a career in Nursing. The CU Denver/CU Nursing Bridge Pathway was created to promote the diversity of health care professionals and to better serve the health care needs of the State of Colorado. This program will assemble up to 20 first time enrolled in college (FTIC/new freshmen) students (applicants must be Colorado residents) each year from broadly diverse backgrounds. The CU Denver/CU Nursing Bridge Pathway is designed for students enrolled at CU Denver who have an interest in progressing into the CU Nursing Traditional (TRAD) Bachelor of Science (BS) nursing program. This bridge pathway is designed to be a 3+2 program consisting of 3 years of prerequisite coursework at CU Denver (Phase I) + 2 years of nursing coursework at CU Nursing (Phase II) resulting in a Bachelor of Science in Nursing.

With this partnership, select students at CU Denver will have the opportunity to receive early admission to the CU Nursing Traditional BS program. In the years leading up to enrollment in the TRAD program, students accepted will receive personalized advising as well as exposure to nursing concepts/experiences provided by both CU Denver and CU Nursing. Additionally students accepted into the CU Denver/CU Nursing Bridge program will have an opportunity to earn a health related certificate to enhance success in the nursing program. Each certificate earned will be visible on the CU Denver transcript upon completion.

For more information, visit https://clas.ucdenver.edu/health-professions-programs/cu-denvercu-nursing-bridge-pathway (https://clas.ucdenver.edu/health-professions-programs/cu-denvercu-nursing-bridge-pathway/) or contact Ms. Trishia Vasquez, Program Director, at trishia.vasquez@ucdenver.edu.

CLAS Academic Advising Partners

Students who are exploring or making decisions about their college major (CLAS Undeclared), along with pre-architecture and first-year College of Arts & Media (CAM) students, are advised and supported through the Center for Undergraduate Exploration and Advising (CUE&A) (https://catalog.ucdenver.edu/cu-denver/undergraduate/advising-other-student-services/advising/center-undergraduate-exploration-advising/).

CU Denver Business School Undergraduate Advising

Location: 4th floor of the Business School, 1475 Lawrence Street
Phone Number: 303-315-8110 or 303-315-8111
Email: undergrad.advising@ucdenver.edu
Website: https://business.ucdenver.edu/current-students/undergraduate-advising (https://business.ucdenver.edu/current-students/undergraduate-advising/)

Overview

We are committed to the success of all students and strive to aid in your personal, professional, and educational growth. Through meaningful interactions, we will empower you by building strong relationships while helping you navigate the college experience.

Our services

Appointments are not required, but we recommend that you check in with us at least once a semester.

- 30-minute in-person appointments
- 30-minute phone appointments
- 30-minute zoom appointments
- Email advising (email your assigned advisor directly)

To schedule an appointment with your advisor, call the front desk at 303-315-8110/8111 or use the self-scheduler link: https://ucdenver.campus.eab.com/home (https://ucdenver.campus.eab.com/home/). We do not accept walk-ins or same day appointments, so plan ahead!

Reach out to your advisor if you need any help with the following:

- Class and degree planning
- Registration questions
- Course overrides and permissions
- Study abroad course approval
- Transfer credit evaluations and approval
- 4+1 program
- Four-year planning
- Graduation checks
- Major/Minor exploration
- Probation/Suspension advising
- Referrals to other academic resources

While we do not assist with tuition assistance, financial aid advising, scholarship assistance, immigration/visa regulation, and internship advising/approval, we are happy to refer you to the right department or person if you have any of these concerns.

School of Education and Human Development Academic Services

Location: Lawrence Street Center, 1380 Lawrence Street Ste 701
Phone Number: 303-315-6300
Email: academicservices@ucdenver.edu
Website: https://education.ucdenver.edu/academic-services/student-resources/undergraduate (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/)

Appointments: Call 303-315-6308

Overview

Academic Services provides support for all SEHD students and is a one-stop location that connects students with support for everything from advising, registration, and graduation to academic and socio-emotional support. In addition, Academic Services serves as the approval office for add/drops, admission to candidacy, degree conferral, CDE licensure and other processes.

Undergraduate Students (new freshmen, new transfer students, continuing students)

Staff academic advisors work with students to create customized four-year degree plans that best meet the aspirations, career goals and timelines of each student. SEHD advisors go above and beyond assisting students with course selections, they also help students:

- Navigate CU Denver systems;
- Track each students' progress in meeting degree, major and licensure requirements;
- Explain university and college policies and processes;
- Connect students to the SEHD Student Success Center and other campus resources; and
- Facilitate advising and registration sessions during New Student Orientation (for first-year students) and Transfer Student Orientation (for transfer students).

Supporting Student Success

The SEHD Student Success Model provides a wrap-around system of support that builds on students cultural and community assets in an inclusive, culturally sustaining approach. Professional academic advisors, faculty, the SEHD Success Center, and SEHD student engagement programming work together in this wrap-around system to ensure the personal, educational, and professional growth of all students. Students also benefit from Peer Mentoring programs, Learning Communities, and other high impact practices that are key to successful and impactful college experiences.

School of Public Affairs Academic Advising

Location: 5th Floor Lawrence Street Center, 1380 Lawrence Street Ste 500
Phone Number: 303-315-2228
Website: https://publicaffairs.ucdenver.edu/current-students/academic-advising (https://publicaffairs.ucdenver.edu/current-students/academic-advising/)

Overview

Academic Advising

The School of Public Affairs offers personalized support to students enrolled in criminal justice and public affairs programs. Students are assigned an academic advisor who will help them to plan their path to graduation and to navigate university and school policies and procedures. It is recommended that students meet regularly with their advisors — at least two to three times per semester for undergraduate students, and two to three times over the course of the program for graduate students.

Advisors can provide support to:

- Help students understand the requirements of their program and how to use the Degree Audit tool in the UCD Access student portal (https://passport.ucdenver.edu/login.php)
- Help transfer students understand which transfer credits can be applied to their program of study

- Help students choose the classes that meet their program requirements and that align with their concentrations and areas of interest
- Help students to understand and resolve any holds that may appear on their student accounts, thus preventing them from registering for classes
- Help students to register for classes
- Refer students to academic and other support available through the School of Public Affairs and CU Denver
- Ensure students are on track with their program completion plans
- Provide authorizations for changes to their class schedules
- Provide information on the process of graduating from CU Denver and participating in Commencement

Undergraduate Core Requirements

Philosophy of the Core Curriculum

The University of Colorado Denver subscribes to a liberal arts philosophy of education in order to develop a broad set of academic skills for the baccalaureate student and to establish a foundation for lifelong learning. Since 1990, the CU Denver Core curriculum of general education has been a campus-wide program for all undergraduate students, independent of the student's major.

The CU Denver faculty designed the Core curriculum to provide undergraduate students a high quality academic foundation while still allowing flexibility based on students' individual backgrounds and specific career goals. The Core curriculum develops multiple literacies, stimulates creative thinking, and utilizes technology. The Core engages students in developing sensitivity to diversity and developing their place in an urban environment, as well as in the rapidly changing global environment. The Core provides an understanding of ourselves, ours and other cultures, and our environment.

CU Denver Core Curriculum: Full Course Listing

Click the link below to view the CU Denver Core Curriculum full course listing in a separate page or click the CU Denver Core Curriculum tab (if viewing in a web browser).

CU Denver Core Curriculum (p. 122)

Please note, some Core requirements may overlap with other major and graduation requirements and others may not. Students should work with an advisor to understand degree requirements and determine their optimal degree plan.

CU Denver Core Curriculum

The following represents the CU Denver Core Curriculum as approved by the faculty on the Core Curriculum Oversight Committee (CCOC). The Core Curriculum is a total of 34-40 semester hours.

Intellectual Competencies 9-10 Total Semester Hours

A minimum letter grade of C- (1.7) ins required for English Composition and Mathematics courses. Pass/Fail grading is not an option.

Core English Composition

Both courses are required.

Code	Title	Hours
ENGL 1020	Core Composition I ^	3
ENGL 2030	Core Composition II ^	3

Core Mathematics

Code	Title	Hours
Select one of the following:		3-4
MATH 1010	Mathematics for the Liberal Arts ^	
MATH 1060	Finite Mathematics	
MATH 1109	Stretch College Algebra-Part 2 [1]	
MATH 1110	College Algebra [1, ^]	
MATH 1120	College Trigonometry [1, ^]	
MATH 1130	Precalculus Mathematics [1, ^]	
MATH 1401	Calculus I [1, ^]	
MATH 2411	Calculus II ^	
MATH 2421	Calculus III ^	
MATH 2830	Introductory Statistics ^	
MATH 3041	Fundamental Mathematics: Algebra, Probability and Data Analysis	

[1] Students may receive credit for only one of the following:

- MATH 1108 Stretch College Algebra-Part 1 or MATH 1070 College Algebra for Business or MATH 1110 College Algebra or MATH 1130 Precalculus Mathematics
- MATH 1109 Stretch College Algebra-Part 2 or MATH 1070 College Algebra for Business or MATH 1110 College Algebra or MATH 1130 Precalculus Mathematics
- MATH 1120 College Trigonometry or MATH 1130 Precalculus Mathematics
- MATH 1080 Calculus for Social Sciences and Business or MATH 1401 Calculus I

Knowledge Areas 19-24 Total Semester Hours

While not formally approved for general CU Denver Core credit, CCOC has authorized new freshmen to apply one (only one) First-Year Seminar course for credit in the Knowledge Area section of the Core. Please see the First-Year Seminar website for a complete listing of FYS courses approved by CCOC for Core credit; www.ucdenver.edu/fye (http://www.ucdenver.edu/fye/) # FYS Courses # FYS Core Curriculum Table.

Core Arts

Code	Title	Hours
Select one of the following:		3
ENGL 2156	Introduction to Creative Writing ^	
FINE 1000	Fostering Creativity	
FINE 1001	Introduction to Art ^	
FINE 1004	Video Games, Story and Society	
FINE 1450	Visual Culture: Ways of Seeing ^	
FITV 1001	Fundamentals of Film and Television	
FITV 1005	Introduction to Theatre & Arts in the Community ^	
FITV 1115	Horror in Western Culture and Cinema	
LDAR 1015	Engaging Landscapes for Wicked Change	
PMUS 1001	Music Appreciation ^	
PMUS 1011	World Pop	

Core Humanities

Code	Title	Hours
Select one of the following:		3
ARAB 1000	Introduction to Cultures of the Arabic-Speaking World	
CHIN 1000	China and the Chinese ^	
ENGL 1601	Storytelling: Literature, Film, and Television ^	
ENGL 2600	Greatest Hits ^	

ETST 2155	African American History
ETST 2357	Asian American & Pacific Islander Cultures
FINE 2600	Art History Survey I
FINE 2610	Art History Survey II
FREN 1000	Introduction to Cultures of the French- Speaking World ^
HIST 1361	U.S. History to 1876 ^
HIST 1362	U.S. History Since 1876 ^
HIST 1381	The History of Now
HIST 1400	Controversies in History ^
LCRT 2000	Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities
PHIL 1012	Truth, Reality, and the Good Life: Introduction to Philosophy ^
PHIL 1020	Right, Wrong, and Seeing the Difference: Introduction to Ethics ^
PHIL 2441	Logic, Language and Scientific Reasoning ^
RLST 1610	Introduction to Religious Studies ^
RLST 2660	World Religions ^
SPAN 1000	Introduction to Cultures of the Spanish Speaking World ^

Core Behavioral Sciences

Code	Title	Hours
Select one of the following:		3-4
ANTH 1302	Introduction to Archaeology ^	
ANTH 2102	Culture and the Human Experience ^	
COMM 1011	Communication and Communities ^	
COMM 1021	Introduction to Media Studies ^	
HDFR 2080	Sex, Human Development and Family Systems	
HDFR 2083	Family and Personal Finance	
LING 2000	Foundations of Linguistics	
PSYC 1000	Introduction to Psychology I ^	
PSYC 1005	Introduction to Psychology II ^	
SPSY 2200	Child and Adolescent Mental Health in Schools and Communities ^	

Core Social Sciences

Code	Title	Hours
Select one of the following:		3-4
CRJU 1000	Criminology and Criminal Justice: An Overview ^	
ECON 2012	Principles of Economics: Macroeconomics ^	
ECON 2022	Principles of Economics: Microeconomics ^	
EDFN 1000	Equality, Rights & Education	
ENVS 1342	Environment, Society and Sustainability ^	
ETST 2000	Introduction to Ethnic Studies ^	
ETST 2108	Introduction to Chicanx and Latinx Studies	
GEOG 1102	World Regions Global Context ^	
GEOG 1302	Introduction to Human Geography	
GEOG 1602	Urban Studies and Planning ^	
HDFR 1080	Lifespan Issues in Family Violence	
HDFR 2200	Love, Family and Human Development ^	
INTE 2500	#Learning: Digital Spaces and Far Out Places	
PBHL 1001	Race, Gender, Class, & Health	
PBHL 2001	Introduction to Public Health ^	
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice ^	
PSCI 1101	American Political System ^	
PUAD 1001	Why You Should Care About Government: Public Service and Administration	
RLST 3800	Spirituality and Ecology in Global Societies	
SJUS 2000	Foundations in Social Justice	
SOCY 1001	Understanding the Social World ^	
SOCY 1011	From Killer Apps to Killer Bots: Technology and Social Change	
SOCY 2462	Introduction to Social Psychology ^	

Core Natural and Physical Sciences, Mathematics

Students must complete two science courses, one of which must have an associated lab component.

Code	Title	Hours
Nat & Phys Science Courses w/Labs intended for Non-Science Majors		
ANTH 1303	Introduction to Biological Anthropology ^	
BIOL 1550	Basic Biology: Ecology and the Diversity of Life [1, ^]	
BIOL 1560	Basic Biology: From Cells to Organisms [1, ^]	
CHEM 1474	Core Chemistry: Chemistry for Everyday [2, ^]	
CHEM 1494	Forensic Chemistry [2, ^]	
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
GEOL 1073 & GEOL 1074	Physical Geology: Surface Processes and Physical Geology: Surface Processes Laboratory ^	
GEOL 1083 & GEOL 1084	Physical Geology: Internal Processes and Physical Geology: Internal Processes Laboratory ^	
PHYS 1052	General Astronomy I ^	
Nat & Phys Science Courses w/Labs intended for Science Majors		
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio) [3,^]	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio) [3,^]	
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I [3,^]	
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II [3,^]	
PHYS 2010 & PHYS 2321	College Physics I and Intro Experimental Phys Lab I ^	
PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II ^	
PHYS 2311 & PHYS 2321	General Physics I: Calculus-Based and Intro Experimental Phys Lab I ^	
PHYS 2311 & PHYS 2351	General Physics I: Calculus-Based and Applied Physics Lab I [4]	
PHYS 2331 & PHYS 2341	General Physics II: Calculus-Based and Intro Experimental Phys Lab II ^	
PHYS 2331 & PHYS 2361	General Physics II: Calculus-Based and Applied Physics Lab II [4]	
Nat & Phys Science Courses WITHOUT Labs [5]		

CSCI 1350	Introduction to Computing in Society
GEOG 1202	Introduction to Physical Geography [^]
PHYS 1100	Foundations of Physics [^]
PSYC 2220	Biological Basis of Behavior [^]

1 Students may not receive credit for BIOL 1550 Basic Biology: Ecology and the Diversity of Life or BIOL 1560 Basic Biology: From Cells to Organisms if they have already received credit for BIOL 2020 Molecules to Cells (Gen Bio) and BIOL 2010 Organisms to Ecosystems (Gen Bio).

2 Students may not receive credit for CHEM 1474 Core Chemistry: Chemistry for Everyday or CHEM 1494 Forensic Chemistry if they have already received credit for CHEM 2031 General Chemistry I and CHEM 2061 General Chemistry II.

3 Honors sections of these courses will apply to the Core Natural & Physical Sciences Requirement. **Note: co-credit is not allowed for regular and honors sections.**

4 General Physics and Applied Physic Lab sequences are required and intended only for Physics (PHYS) majors and minors.

5 Students may use an approved Core Math course, except the course used to fulfill the Core Math requirement, or MATH 1108 Stretch College Algebra-Part 1 as a non-lab science.

International Perspectives 3 Total Semester Hours

Core International Perspectives[1]

Code	Title	Hours
Select one of the following:		3
ANTH 3000	Globalization, Migration and Transnationalism	
CLDE 1000	Language, Identity, & Power: International Perspectives	
ENGL 3798	International Perspectives in Literature and Film	
ENGR 3600	International Dimensions of Technology and Culture	
ETST 3110	Indigenous Studies	
ETST 3272	Global Media	
FINE 1002	International Perspectives through Animation	
FINE 3775	Asian Art After 1850	
FITV 1120	Contemporary World Cinema	
FITV 3550	World Theatre	
FREN 3200	The Francophone World in the Post-Colonial Era	
GEOG 3412	Globalization and Regional Development	
GRMN 3200	Current German Society and Culture	
HDFR 1000	Global Human Development & Learning	
HDFR 3250	Families in Global Perspectives	
HIST 3121	The World at War, 1914-1945	
HIST 4032	Globalization in World History Since 1945	
INTB 3000	Global Perspectives	
INTB/MKTG 4200	International Marketing	
INTS 2020	Foundations of International Studies	
MKTG 4200	International Marketing	
PBHL 2052	Global Demography and Health	
PSCI 3022	Political Systems of the World	
PSCI 3042	World Politics	
RLST 3120	Islamic Traditions	
RLST/PHIL 3410	Asian Philosophies and Religions	
SOCY 3720	Global Perspectives on Social Issues	

1 The Core International Perspectives requirement may be waived on the basis of prior international residency, study abroad, approved military experience, or other significant international experience, as described in the International Perspectives Proficiency Credit Guidelines (http://www.ucdenver.edu/student-services/resources/ue/core/Documents/IP%20Proficiency%20Guidelines%20revised%204-2018%20-%20FINAL.pdf).

Cultural Diversity 3 Total Semester Hours

Core Cultural Diversity[1]

Code	Title	Hours
Select one of the following:		3
ANTH 3142	Cultural Diversity in the Modern World	
BUSN 4100	Empowering Women in Business	
COMM 3271	Communication and Diversity	
ECON 3100	Economics of Race and Gender	
EDFN 3000	Undocumented Mexican Immigration	
EDFN 4000	Food Justice in City & Schools	
ENGL 3795	Race and Ethnicity in American Literature	
ENGR 3400	Technology and Culture	
ETST 3036	American Indian Cultural Images	
ETST 3704	Culture, Racism and Alienation	
FINE 3636	Through the Lens: Photography and Diversity	
FITV 3611	Drama of Diversity	
HDFR 3020	Black and Latino Children in Families and Schools	
HDFR 3800	Leadership for Racial Justice in School and Community Settings	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3349	Social Movements in 20th Century America	
LCRT 3815	Once Upon a Time: Family Literacies in Culturally Diverse Communities	
LING 3100	Language in Society	
MGMT 4100	Leveraging Diversity and Inclusion in Business	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PMUS 3100	US Music: Social & Political Impact	
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSYC 4485	Psychology of Cultural Diversity	
RLST 4000	Religion and Cultural Diversity	
SOCY 3020	Race and Ethnicity in the U.S.	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

[1] Transfer Credit must have been taken at the upper-division level from the sending institution.

Other Degree Requirements

In addition to the CU Denver Core Curriculum requirements listed above, students must complete a major and fulfill all additional School/College requirements. More information on these requirements can be found in the Academic Catalog in the following locations:

- Programs (p. 129)
- CU Denver General Graduation Requirements (p. 126)
- School/College Specific Graduation Requirements
  - Business School (p. 132)
  - College of Architecture and Planning (p. 189)
  - College of Arts & Media (p. 210)
  - College of Engineering, Design and Computing (p. 295)
  - College of Liberal Arts and Sciences (p. 376)
  - School of Education and Human Development (p. 877)
  - School of Public Affairs (p. 967)

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^ indicates this is a gtPathways course

Graduation

General Graduation Requirements

To receive a bachelor's degree from the University of Colorado Denver, students must satisfy all of the requirements below, in addition to completing a Major (p. 1289) and fulfilling all of their School or College requirements (see links below).

Please note that the requirements below are basic university requirements. Consult your School/College and Major to determine whether they have put additional requirements in place that further restrict these categories.

- A minimum of 120 credit hours is required to graduate from CU Denver with a bachelor's level degree
- A minimum 2.000 cumulative GPA is required for all University of Colorado coursework
- Satisfactory completion of the CU Denver Core Curriculum (an 11 course, 34-38 semester hour curriculum of general education, outlined here (p. 122))

Repeat Statement

Though students may take any course more than once, credit toward graduation is counted only once for a typical course, unless otherwise noted in the course description. Some types of courses (e.g. Internships, Independent Studies, etc.) may be repeatable for applicable credit within a certain range of total semester hours. See course descriptions for the max semester hours applicable from each course.

Residency Requirement

The Higher Learning Commission (HLC), which accredits this university, requires that at least 30 of the 120 credits earned for a baccalaureate degree be taken in residence at the University of Colorado Denver. Students are advised that individual schools/colleges may have higher residency requirements.

School/College Specific Graduation Requirements

- Business School (p. 132)
- College of Architecture and Planning (p. 189)
- College of Arts & Media (p. 210)
- College of Engineering, Design and Computing (p. 295)
- College of Liberal Arts and Sciences (p. 376)
- School of Education and Human Development (p. 877)
- School of Public Affairs (p. 967)

Petitioning for Exceptions to Standing Academic Policy

The Office of the Registrar does not have a specific policy regarding petitions for exceptions.

School/College Specific Policy

- College of Arts & Media (p. 210)
- Business School (p. 132)
- School of Education and Human Development (p. 877)
- College of Liberal Arts and Sciences (p. 380)

Selection of Catalog for Degree Requirements

When a student is matriculated and enrolled at CU Denver, they are required to fulfill the general education and graduation requirements specified in the catalog current at that time. When students formally declare a major, they are required to fulfill the major requirements in the catalog current at that time.

School/College Specific Policy

- College of Arts & Media (p. 210)

Applying for Graduation

Students planning to graduate must apply for graduation through the UCDAccess student portal between the first day of registration and census for the term they intend to graduate. Students must contact their academic advisor to determine what requirements remain for graduation, as well as complete any paperwork required by their school/college. Students will not be officially certified to graduate until a final audit of the student's record has been completed approximately six weeks after the end of the term. After students have been certified to graduate, they must reapply with the Office of Admissions in order to return to the Denver Campus.

To review the official policy, please click here (https://www.ucdenver.edu/policies/) and search for policy number 7017.

School/College Specific Policy

- College of Architecture and Planning (p. 189)
- College of Arts & Media (p. 210)
- Business School (p. 132)
- School of Education and Human Development (p. 877)
- College of Engineering, Design and Computing (p. 295)

Commencement Ceremony

In early March, informational brochures will be mailed to students eligible to participate in the May spring-semester commencement. In early October, information regarding the December commencement will be mailed to students who graduated in summer term or expect to graduate in fall term. Information will be provided about registering for the ceremony, renting a cap and gown, and ordering diploma frames, announcements, and other memorabilia. This information is also available on the Commencement website (https://www.ucdenver.edu/commencement/).

Academic Honors

Dean's List

CU Denver uses fixed criteria across all schools/colleges for determining eligibility for the Dean's List. This policy applies to undergraduate students.

For fall and spring semesters, students must successfully complete nine graded hours in the semester. These courses can be both within and outside of the student's home school/college. Metropolitan State University of Denver pooled courses will not be included in the GPA calculation nor will they apply toward the nine hours required for consideration. The GPA for inclusion in the Dean's List is 3.750.

In the summer semester, students must complete six graded hours. Course inclusion will be the same as in fall and spring semesters. The GPA for Dean's List in summer is also 3.750.

Scholarships tied to Dean's Lists may have additional requirements.

The Registrar's Office calculates the semester GPAs that are the basis for determining the Dean's List. Incompletes will not be considered in

the calculation of minimum number of hours. The Dean's List will not be recalculated to include completed incompletes.

College Honors

School/College Specific Policy

COLLEGE OF ARTS & MEDIA (p. 210)
BUSINESS SCHOOL (p. 132)
SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT (p. 877)
COLLEGE OF ENGINEERING, DESIGN AND COMPUTING (p. 295)
COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

Departmental Honors

School/College Specific Policy

COLLEGE OF LIBERAL ARTS AND SCIENCES (p. 380)

University Honors

University Honors is awarded at the time of graduation to students who successfully completed the University Honors and Leadership Program (https://www.ucdenver.edu/honors/).

Class Rank

Class rank will be calculated by undergraduate degree program within a school or college. It is possible for more than one student to have the same class rank. If more than one student has equivalent class ranking it will be reported as such. The option for a letter indicating the student's class rank will be provided to any graduating undergraduate, but there will be no designation on the University of Colorado transcript for Denver Campus students receiving bachelor's degrees. There will be one class rank per student per degree. Students can obtain class rank letters through the student portal. Late postings and grade changes after degrees are posted will not recalculate rankings. Rankings will be a snapshot calculation conducted once per term for each graduating undergraduate student after degrees are posted.

Four-Year Graduation Guarantee

The University of Colorado Denver has adopted a set of guidelines to define the conditions under which an undergraduate student will be guaranteed to graduate in four years. More information is available through the undergraduate advising offices for each college and the major program offices. The Denver Campus has five undergraduate colleges in which this guarantee applies: College of Arts & Media, Business School, College of Engineering, Design and Computing, College of Liberal Arts and Sciences and School of Public Affairs.

CU Denver guarantees that if a student begins studies in a fall semester and lack of scheduling of essential courses is found to have prevented a student from completing all course work necessary for a BA, BFA or BS degree from the university by the end of the student's eighth consecutive fall and spring semester, the college/school shall provide tuition plus any course fees for all courses required for completion of the degree requirements. This applies only when needed courses are not offered by the college/school and does not apply to scheduling conflicts for individual students. Students must satisfy all the requirements described below to be eligible for this guarantee.

This guarantee applies to all students who enroll beginning in a fall term as first-semester, full-time freshmen without admission deficiencies, who do not need remedial course work and who satisfy all the requirements described below. This guarantee does not include completion of all options within the major, a second major, a double degree, a minor or a certificate program. The four-year graduation guarantee does not apply to programs in which the degree has been discontinued or is in the process of being phased out. In these cases, every effort will be made to allow students to fulfill requirements by taking courses at other universities and colleges to facilitate timely completion of the degree.

Some study abroad programs may not provide a sufficient range of courses to allow students to meet the requirements, thus, students who participate in study abroad programs during the fall or spring semesters may not be eligible for this guarantee. A student may be able to participate in a study abroad program during the summer semester and still meet all the requirements of this guarantee. It is essential that a student work closely with an advisor to determine if the student can participate in a study abroad program and still meet all the requirements of this guarantee.

Requirements

Students must satisfy all of the following requirements to be eligible for this guarantee.

1. Students must begin studies in a fall semester and enroll in CU Denver course work as specified on the student plan of study for eight consecutive fall and spring semesters.
2. Students must complete all required course work by the end of the eighth semester.
3. No fewer than 60 semester hours of applicable course work must be completed successfully by the end of the second year (24 calendar months); 90 semester hours by the end of the third year (36 calendar months); and 120 semester hours by the end of the fourth year (48 calendar months). Students must successfully complete an average of 15 semester hours each semester.
4. Students must meet with their college advisor and their major advisor for academic advising during the first, third, fifth and seventh semesters of study.
5. The major must be declared no later than the end of the first semester of study and students must not change their major or any options within the major.
6. A required plan of study toward the major must be agreed upon and signed by the student and advisor at the end of the first semester. Thereafter students must make satisfactory progress toward completing the major, as defined by each major, and the general education requirements. Courses with certain grades may not meet the satisfactory progress requirement of this guarantee. A statement of what constitutes satisfactory progress and what grades are acceptable is available from the major or departmental office at the time the major is declared.
7. A minimum of 30 semester hours of college general education courses should be completed by the end of the second year, including core curriculum courses that also meet major requirements and foreign language proficiency.
8. All lower-division graduation requirements must be successfully completed by the 90-semester-hour mark.
9. Students must remain in good academic standing according to their school/college academic policies.
10. Grades of C-, C or C+, as defined by the college/school, must be earned in all course work required for the major, and students must have a cumulative GPA of 2.000 in all major course work attempted.
11. Students must register each semester within one week of the student's specified eligibility to register.
12. Students must take courses that are specified in the student plan of study approved by their advisor.

13. Elective courses must be avoided if they conflict with required major or general education courses. Elective courses must not be given a higher priority than required courses.
14. Students must meet all departmental, school or college and university policies regarding graduation requirements.
15. The college/school must be notified in writing of the student's intent to graduate no later than the beginning of the seventh semester of study. A graduation application must be filed no later than the deadline for the appropriate graduation date. The student must complete a graduation checkout/senior audit with their advisor.

The student is responsible for and must keep documentation proving that these requirements were satisfied (e.g., records of advising meetings attended, advising records and instructions, etc.).

To review the policy, please click here (https://www.ucdenver.edu/policies/) and search policy number 7023.

Schools, Colleges, and Departments

Denver Campus

With a solid academic reputation and award-winning faculty, the Denver Campus offers bachelor degree programs through seven distinct academic units and additional programs through the CU Denver Honors Programs.

- Business School (p. 130)
- College of Architecture and Planning (p. 188)
- College of Arts & Media (p. 208)
- College of Engineering, Design & Computing (p. 293)
- College of Liberal Arts & Sciences (p. 373)
- School of Education & Human Development (p. 876)
- School of Public Affairs (p. 966)
- CU Denver Honors Programs (p. 1002)

Business School

Leadership

Dean

Scott Dawson

Associate Deans

Jahangir Karimi, Associate Dean of Faculty, Staff and Operations
TBD, Associate Dean of Programs

Assistant Deans

Connie Amen, Assistant Dean of Finance and Human Resources
Shane Hoon, Assistant Dean of Student Success

Chief of Staff

Malena Brohm

Contact

Dean's Office
Business School Building
1475 Lawrence Street
Denver, CO 80202
Phone: 303-315-8000
Fax: 303-315-8040

Mailing Address
The Business School
Campus Box 165
P.O. Box 173364
Denver, CO 80217-3364
Website: http://business.ucdenver.edu

Admissions/Advising
Phone: 303-315-8101, 303-315-8110

Overview

Located in the heart of the Rocky Mountain business community, the Business School at the University of Colorado Denver prepares students with the knowledge and skills necessary to become effective, responsible business professionals. We're able to achieve a standard of excellence by bringing together nationally recognized faculty and highly motivated, mature students in an intellectually challenging academic environment. CU Denver's Business School is a research institution. Because our faculty are nationally recognized for scholarly research as well as for their teaching skills, our students have the opportunity to be on the leading edge of business management theory and practice. Our class schedules and curriculum offer flexibility to meet your needs whether you plan to attend full or part-time. Whether you're an experienced working professional seeking an advanced degree or preparing for a new career in the business world, you'll gain the knowledge and perspective necessary to succeed in today's challenging business environment.

Educational Goals

The Business School is committed to superb teaching, connecting theory to practice that focuses on:

- current and relevant knowledge and skills necessary for success in the highly competitive global business environment
- experience in cooperative and team-based work skills
- integrated professional and functional expertise
- sensitivity to cultural and ethnic diversity

Our undergraduate program, which serves both traditional and nontraditional students, leads to a baccalaureate degree in business with a substantial liberal arts component. The program is closely linked, through articulation agreements, to lower-division programs offered by Colorado's four-year and community colleges.

Key elements of our academic programs are the provision of top-quality career advising and placement services, as well as flexible schedules and programs to meet a wide range of student needs. We are committed to supporting our students' efforts to pursue rewarding careers.

Faculty

Our nationally recognized faculty members are vigorous and enthusiastic about teaching and research. Faculty members hold degrees from the nation's leading business schools, including University of Chicago, Northwestern University, MIT, Berkeley, University of Michigan, Duke and UT Austin. Many of them also bring years of valuable experience in private industry. Their interdisciplinary expertise, academic achievements, scholarly research and business experience provide students with a dynamic learning environment.

Scholarships and Financial Aid

Many programs for financial aid are administered by the Office of Financial Aid (p. 50). Call 303-315-5969 or visit us in-person on the first floor of the Student Commons Building for detailed information.

Thanks to the generous support of the Colorado business community and others, the Business School has a significant number of scholarships to offer its students. Scholarships are awarded on the basis of merit and/or financial need. The amount of the award and the number of awards available vary.

Over 30 different scholarships are available to eligible Business School students, with multiple awards from most scholarships.

Further information about these scholarships, including eligibility criteria and application forms, may be obtained by visiting the Financial Aid & Scholarships website (https://www.ucdenver.edu/student-finances/scholarships/), by calling 303-315-5969, or by viewing scholarship information on the Business School website (https://business.ucdenver.edu/).

Institute for International Business

CU Denver's Institute for International Business (IIB) was created in 1988 by the Board of Regents of the University of Colorado to serve as a center for the advanced study and teaching of international business (IB). The US Department of Education designated the IIB as a Center for International Business Education and Research, a prestigious center of excellence award that it has competitively held since 1993. CU Denver is one of only 15 CIBERs in the United States and the only one in Colorado. Among others, the IIB/CIBER promotes interdisciplinary and multi-campus collaboration at the University of Colorado; hosts monthly International Executive Roundtable lectures focused on global competitiveness; and sponsors IB development programs, conferences and workshops for faculty and the business community in Colorado, the Rocky Mountain region and the United States. The IIB/CIBER works closely with CU Denver's Business School in advancing its international business programs and research, as well as other colleges, schools, and

departments at CU to promote various internationalization initiatives.

Call 303-315-8887 or visit the IIB website at www.ucdenver.edu/institutes/international-business (http://www.ucdenver.edu/institutes/international-business/) for more information.

Academic Programs

A carefully designed curriculum to prepare students for success in business administration is available for the student seeking an undergraduate degree. The school offers courses leading to the bachelor of science in business administration (BSBA).

Undergraduate Degree Programs

Associate Dean: TBD
Assistant Dean: Shane Hoon

The undergraduate curriculum leading to the bachelor of science (business administration) degree is intended to help the student achieve the following general objectives:

- an understanding of the activities that constitute a business enterprise and the principles underlying administration of those activities
- the ability to think logically and analytically about the kind of complex problems encountered by management
- facility in the arts of communication
- a comprehension of human relationships involved in an organization
- awareness of the social and ethical responsibilities of those in administrative positions
- skills in the art of learning that will help the student continue self-education after leaving the campus

Double Major Programs

Numerous career opportunities exist for people trained in both a specialized field and management. For this reason, students may be interested in combined programs of study in two different majors leading to completion of degree requirements concurrently in two areas. If you have questions on our programs, email the undergraduate business advisors at undergrad.advising@ucdenver.edu or call 303-315-8110 to make an appointment with a business advisor.

Undergraduate Advising and Academic Planning

Upon admission to the school, students are encouraged to meet with an advisor who will guide you through the steps needed to have a successful career as a student in the Business School and help you complete the requirements for the BSBA (bachelor of science business administration) degree. If you seek advising, or have questions on course selection and other matters, you may email the advisors at: undergrad.advising@ucdenver.edu or call 303-315-8110 to make an appointment.

Undergraduate Majors

Business students must choose a major and complete the requirements for the major. The major provides specialization beyond the general background of the undergraduate core and the business core. Business students are strongly encouraged to declare a major by the time they have accumulated 60-75 semester hours. The courses in the major are typically completed in the junior and senior years.

Extend Your Education

Whether you are looking to advance in your current field or prepare for an entirely new career, the Business School offers opportunities to suit your goals.

A variety of classes and programs are available to community members and alumni. Classes are taught by expert faculty or influential members of the Denver business community, imparting knowledge that is readily applicable in the field.

Entrepreneurship

The Jake Jabs Center for Entrepreneurship offers programs for those looking to start a new venture or enhance their entrepreneurial skills.

Business School Admissions Information

Applicants whose cumulative GPA and SAT/ACT test scores meet or exceed the middle 50 percent range are considered strong candidates for admission to the Business School.

To be considered for transfer admissions, applicants must have at least a 2.0 cumulative GPA and have completed 24 or more college credits. For transfer students who have less than 24 college credits, high school GPA and or ACT/SAT test scores are required.

(For Graduate Programs and information please refer to the Graduate **(**http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/business-school/#departmentstext**) catalog.)**

Business School Departments and Programs

Bachelor of Science in Business Administration

- Accounting, BS in Business Administration (p. 163)
- Entrepreneurship, BS in Business Administration (p. 164)
- Finance, BS in Business Administration (p. 165)
- Financial Management, BS in Business Administration (p. 166)
- Human Resources Management, BS in Business Administration (p. 167)
- Information Systems, BS in Business Administration (p. 168)
- International Business, BS in Business Administration (p. 170)
- Management, BS in Business Administration (p. 171)
- Marketing, BS in Business Administration (p. 172)
- Risk Management and Insurance, BS in Business Administration (p. 173)
- Sports Business, BS in Business Administration (p. 175)

Minors

- Business Analytics Minor (p. 176)
- Business Fundamentals Minor (p. 177)
- Entrepreneurship Minor (p. 179)
- Finance Minor (p. 180)
- Information Systems Minor (p. 181)
- Risk Management and Insurance Minor (p. 182)

Certificates

- Commodities Certificate (p. 184)
- Entrepreneurship Certificate (p. 185)
- Risk Management and Insurance Undergraduate Certificate (p. 186)

Business School Graduation Requirements

For additional information regarding Graduation policies and procedures, please visit the Graduation (p. 126) section of the catalog.

In addition to the campus core, the following requirements must be met:

Required Courses

The following courses are required prerequisites for courses in the business core and may count toward the campus core as well. Please see an advisor for more details:

Code	Title	Hours
ECON 2012	Principles of Economics: Macroeconomics	3
ECON 2022	Principles of Economics: Microeconomics	3
MATH 1060	Finite Mathematics [1]	3
Total Hours		**9**

The following courses are graduation requirements for all business students:

Code	Title	Hours
COMM 2050	Professional Presentations	3
ENGL 3170	Business Writing	3
Business General Credit - Experiential Learning [2]		3
UNIV 1110	College Success [3]	1
Total Hours		**10**

1. Other higher level math classes may apply in place of this requirement. Check with an advisor for more information.
2. Business students must earn 3 semester hours of credit in an approved Experiential Learning course: study abroad, internship, or 1 of 3 project-based courses.
3. Only required for incoming first-term freshmen students. May be substituted with BUSN 1100.

Business Core

Specific grades are required for the business core courses in order to meet prerequisites and qualify for graduation. Prerequisites are listed within the course description. Students should meet with their advisor for recommendations on which courses to take first.

The following courses require a C- or higher:

Code	Title	Hours
BUSN 2110	Cultivating Emotional Intelligence	1
BUSN 3110	Career and Professional Development	1
ISMG 2050	Business Problem Solving Tools	3
BANA 2010	Business Statistics	3
ACCT 2200	Financial Accounting and Financial Statement Analysis	3
ACCT 2220	Managerial Accounting and Professional Issues	3
BLAW 3050	Business Law and Ethics	3
Total Hours		**17**

The following courses require a C or higher:

Code	Title	Hours
BANA 3000	Operations Management	3
FNCE 3000	Principles of Finance	3
ISMG 3000	Technology In Business [1]	3
MGMT 3000	Managing Individuals and Teams	3
MKTG 3000	Principles of Marketing	3
MGMT 4500	Business Policy and Strategic Management [2]	3
Total Hours		**18**

1. Note: Students in the Accounting or Financial Management majors or Accounting or Financial Management with specializations in Information Systems are required to complete ACCT 4054 Accounting Information Systems instead of ISMG 3000 Technology In Business.
2. This is a capstone course and must be completed in your last semester and only after the 33 credit hours of business core listed above are completed.

International Studies

Choose **one** of the following courses: (**a specific course may be required for some majors**)

Code	Title	Hours
Select one of the following:		3
ACCT 4370	International Accounting	
FNCE 4370	International Financial Management [1]	
MGMT 4400	Environments of International Business	
MKTG 4200	International Marketing	
RISK 4509	Global Risk Management	
Total Hours		**3**

1. Students in the Finance Major, Financial Management Major, and Financial Management with Information Systems Specialization Major are required to complete this course specifically.

Other courses in international business may be offered periodically that satisfy the international studies requirement.

Major

Business students must complete the prescribed courses in a major at CU Denver/ complete all requirements associated with your individual major. Transfer courses are not permitted to apply in the major.

The majors include:

- Accounting Major - BS in Business Administration
- Entrepreneurship Major - BS in Business Administration
- Finance Major - BS in Business Administration
- Financial Management Major - BS in Business Administration
- Human Resources Management Major - BS in Business Administration

- Information Systems Major (specializations available in Accounting, Financial Management, Human Resources Management, Management, and Marketing) - BS in Business Administration
- International Business Major - BS in Business Administration
- Management Major - BS in Business Administration
- Marketing Major - BS in Business Administration
- Risk Management and Insurance Major - BS in Business Administration
- Sports Business Major - BS in Business Administration

The specific requirements of these majors are described in subsequent sections.

Experiential Learning

Business students must earn 3 semester hours of credit in an approved Experiential Learning course. This can be satisfied by completing: an Internship; MGMT 4900 Project Management and Practice/ISMG 4900 Project Management and Practice; MGMT 4120 Collaborative Experiential Learning; MGMT 4825 Sustainable Change Leadership: Turning Business Into a Force for Good; or completing an approved Study Abroad business course. Students completing the RISK program must take RISK 3949 Experiential Learning in RMI Industry.

Students may petition to waive the experiential learning requirement based on documented full time work experience of one year or more related to their chosen major.

General Electives

General electives are credits needed in addition to your specific degree requirements in order for you to reach the minimum 120 credits needed for graduation. The amount of electives needed varies from student to student, so always check with your advisor to confirm how many you need.

You are welcome to take courses from any area, business or non-business, and any level, lower or upper division. Generally, to be acceptable, electives must be college level, not repetitious of other work applied toward the degree, and academic as opposed to vocational or technical.

If you have a lot of general electives to complete, you may want to consider adding a second business major or a non-business minor. Talk to your advisor about how a minor or second major could fit into your degree plan.

Independent Study

Junior or senior business students desiring to work beyond regular course coverage may take variable credit courses (1-3 semester hours) as electives under the direction of an instructor who approves the project, but the student must have the appropriate approval before registering. A maximum of 6 semester hours may be applied toward degree requirements. An independent study request form must be signed by the student, the instructor, the program director and the Assistant Dean.

Internship

A maximum of 6 semester hours of approved independent study, internships, experimental studies, choir, band and/or music lessons, art lessons may be applied.

Pass/Fail

Students may select the P+/P/F grading option for some courses. In addition to Downtown Campus policies covering the P+/P/F grading option (see the Academic Policy (p. 109) section of this catalog), Business School students must adhere to the following grading policies. The following categories of coursework may not be taken on a P+/P/F or S/U basis:

- Courses used to complete Business Core, a student's major, business minor, specializations, and/or certificate requirements.
- Courses required to demonstrate proficiency (includes the first two semesters of foreign language and regional expertise coursework.)
- Courses used to satisfy Business School graduation requirements. (COMM 2050 Professional Presentations, ECON 2012 Principles of Economics: Macroeconomics, ECON 2022 Principles of Economics: Microeconomics, ENGL 3170 Business Writing, and MGMT 4900 Project Management and Practice/ISMG 4900 Project Management and Practice, MGMT 4120 Collaborative Experiential Learning, and MGMT 4825 Sustainable Change Leadership: Turning Business Into a Force for Good. Exception: an internship must be taken on a satisfactory/unsatisfactory basis.)

GPA Requirement

To graduate, a student must maintain a minimum cumulative GPA of 2.0 for all university courses as well as a minimum college GPA of 2.0 for all business courses taken at CU Denver. All graded attempts are calculated in the cumulative and Business GPAs.

Upper Division

All students receiving a BS degree in business must take at least 45 upper-division semester hours.

Residency Requirement

At least 30 semester hours of business courses (including the business major courses) must be completed as a CU Denver student. The 30 hours for residence must include MGMT 4500 Business Policy and Strategic Management.

Business School Foreign Language Hours Proficiency

The Business School's foreign language requirement or regional expertise requires that students demonstrate a minimum level of proficiency in one foreign language or culture.

This requirement is met through the completion of one of the following:

- a second-year (Level II) high school course with a minimum grade of C-
- a second-semester-level college course (1020) with a minimum grade of C-
- satisfactory proficiency testing, including taking and passing a proficiency exam
- completion of three regional expertise courses

High school courses will not apply toward degree credit; however, they will serve to satisfy the foreign language requirement. Students may need additional electives to make up this credit - check with an advisor.

Students choosing the regional expertise requirement with one year of high school foreign language or one semester of college-level work can satisfy the requirement by completing a minimum of 6 semester hours of course work from an approved list that relates to the politics, arts, history, culture or economy of any region of the world other than North America.

Courses used in the expertise area must meet the Business School guidelines and can be chosen from the list specified by the Business School. Students should contact their business advisor if they have questions. The advisors can be reached by emailing undergrad.advising@ucdenver.edu or calling 303-315-8110 to schedule an appointment.

Applying for Graduation

A senior audit is completed on all students who have completed 90 or more semester hours. Students must file an undergraduate candidacy form prior to registering for their final semester. Failure to do so will delay graduation.

Students must complete the online intent to graduate form on their student portal when they register for their last semester.

Academic Honors

Students who demonstrate superior scholarship are given special recognition at graduation. Students must achieve a cumulative GPA of 3.500-3.649 in all business courses taken at the University of Colorado to be considered for cum laude, achieve a cumulative GPA 3.650-3.749 in all business courses taken at the University of Colorado to be considered for magna cum laude, and achieve a cumulative GPA of 3.750 or higher in all business courses taken at the University of Colorado to be considered for summa cum laude.

Petitioning for Exceptions to Standing Academic Policy

Students should contact a staff advisor in the Business School's programs office (undergraduates call 303-315-8110) for appeal and petition procedures pertaining to rules and regulations of the school.

Business School Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

Explanation of Course Numbers

The course numbering system used at CU Denver identifies the class standing required for enrollment. Students are expected to take 1000-level courses in their freshman year, 2000-level courses in their sophomore year, 3000-level courses in their junior year and 4000-level courses in their senior year. Courses at the 5000 and 6000 level are restricted to master's-level business students, and courses at the 7000 level are restricted to PhD students.

Independent Study

Junior or senior business students desiring to work beyond regular course coverage may take variable credit courses (1-3 semester hours) as non-business electives under the direction of an instructor who approves the project, but the student must have the appropriate approval before registering. A maximum of 6 semester hours may be applied toward degree requirements. A Special Processing form (https://www.ucdenver.edu/registrar/student-resources/forms/) must be signed by the student, the instructor, the program director and the director of advising and admissions.

Internships

Internships are included in the experiential learning requirement of the undergraduate business program. To be eligible to enroll in an internship for experiential learning credit, the undergraduate student must meet the following grade and course work requirements:

- the student must be in good standing with a cumulative GPA of at least 2.750, and a GPA in the area of emphasis of at least 2.000
- the student must have completed (a) all required lower-division course work and (b) at least 21 semester hours of the business core courses

Graduate students must be admitted to the Business School, be in good standing with at least a 3.000 GPA and have completed 15 semester hours of graduate work on the Denver Campus.

Interested students should contact the Experiential Learning Center (303-315-7318) for further details about the program.

How to Declare or Change a Major or Minor

Business students must complete the prescribed major courses, all of which must be taken at CU Denver. Major core sections range from 18-36 credit hours. Business students are advised to select a major prior to completing the business core, and are encouraged to declare a major by the time they have accumulated 60 to 75 credit hours. The courses in the major core are completed in the junior and senior years after completing the required prerequisites.

The majors offered include Accounting, Entrepreneurship, Finance, Financial Management, Human Resources Management, Information Systems, International Business, Management, Marketing, Risk Management and Insurance, and Sports Business. The specific requirements for these majors are described in subsequent sections.

Students who want to transfer to the Business School from another college or school of the University of Colorado Denver must formally apply for an intra-university transfer (IUT) to the Business School. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form and transcripts from the University of Colorado to the business program coordinator. Intra-university transfer forms are available from the Office of the Registrar or the Business School Advising Office. Transcripts (https://www.ucdenver.edu/registrar/student-resources/transcripts/) can be ordered via the Office of the Registrar. The transcript must include the student's most recent semester at the university. Students with previous course work from other institutions are also required to submit a copy of their transfer credit evaluations (advanced standings). Additional information about IUTs can be found here (p. 68).

Adding a Course

Students may add courses to their original schedule through the census date (first 12 days of the fall or spring semester, first eight days of summer session). Instructor approval is required to add a course after the first week of classes. In some cases, instructors do not allow students to add their course if the student fails to attend the first week of classes. In

addition, instructors may ask that a student be administratively dropped from the course for failure to attend the first week of classes.

Course Credit Limitations

The school will accept:

- a maximum of 6 semester hours of the theory of physical education, theory of recreation and/or theory of dance
- a maximum of 6 semester hours of approved independent study, internships, experimental studies, choir, band and/or music lessons, art lessons
- a maximum of 12 semester hours of advanced ROTC, providing the student is enrolled in the program and completes the total program.

The school will not accept:

- activity physical education classes, recreation, workshops, orientations, dance, teaching methods, practicums and courses reviewing basic skills in computers, English composition, mathematics and chemistry.

Administrative Drop Policy

The school reserves the right to administratively drop students who are incorrectly enrolled in business courses. Instructors also may recommend that students who fail to meet expected course attendance or course prerequisites be dropped from the course. Generally, students who are administratively dropped will not receive tuition refunds.

In some cases, failure to attend the first week of classes may result in an administrative drop from that course.

Note: Students who never attend class are not automatically dropped from the course. The student is responsible for dropping courses and failure to do so will result in a tuition charge for the class and an F grade.

Student Complaint/Appeal Process

Students must follow the process below.

1. Discuss concerns with the faculty member.
2. If the issue is not resolved after a conversation with the faculty member, discuss concerns with the Discipline Director.
3. If the issue is not resolved after a conversation with the Discipline Director, discuss concerns with the Associate Dean.

The Discipline Director and Associate Dean will evaluate the student complaint to see if the faculty or staff member behaved in accordance with Business School and University policies and will communicate any decisions related to the complaint to both the student and faculty/staff member involved.

If the student complaint is related to grading, the Associate Dean or Discipline Director will not offer opinions with respect to the qualitative assessment of a student's work but may consider whether the procedures used to determine a grade were consistent with the syllabus and written amendments to the syllabus. No passing grade will be changed after one year. Requests for grade adjustments/appeals must be made in the semester immediately following the semester in which the disputed grade was earned.

Students may reach out to the advising office to determine the names and contact information of the appropriate Discipline Directors and/or Associate Dean by emailingundergrad.advising@ucdenver.edu#orgrad.advising@ucdenver.edu.

Special Grading Options

Only internships, independent studies and nonbusiness elective courses may be taken for a grade of S/U or P+/P/F. Required business and nonbusiness courses (including the campus core) may not be taken as S/U or P+/P/F. A maximum of 6 hours of S/U and P+/P/F credits may be applied toward the business degree. Courses taken in excess of the maximum will not be applied toward degree requirements. P+/P/F determination must be made within the posted deadlines and may not be rescinded (unless approved by the undergraduate committee).

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

No Credit

Pass-Fail or No Credit (Audit). With the exception of internships, experiential learning and travel study courses, the Business School does not permit the election of pass-fail grading for any business course required for the student's degree. Students are not allowed to audit business courses.

Incomplete Grades

The only incomplete grade given in the school is *I*. An *I* grade is assigned only when documented circumstances clearly beyond the student's control prevent completion of course requirements (exams, papers, etc.). Students must sign a contract outlining how they will make up the missing work with the instructor giving the *I*. Students need not register for the course a second time. All *I* grades must be made up within the contract period (which may not exceed one year), or the *I* will automatically be changed to the grade of F. The student is responsible for contacting the instructor to schedule the completion of the coursework.

Holds

Enrollment in business classes is limited to students who have been admitted to business degree programs and to other students as described in the separate undergraduate and graduate policy sections. The course registration criteria are designed to meet a number of objectives:

- to serve students in other colleges who have business-related education objectives or requirements
- to serve non-degree students who have specific career or education goals
- to assure access to business courses for students admitted into a business degree program

Refer to the student portal each term for course availability and prerequisites.

Attendance Policy

Students are required to attend classes, including online classes, on a regular basis. Absences must be arranged with the instructor and must conform with university and instructor policies on attendance.

Course Repeat Policy

A failed course (grade of F) may be repeated; however, the F will be included in the GPA and will appear on the transcript. Students must earn at least a C grade in required business core courses. Core business courses must be repeated if the student earns less than a C grade.

Credit Age and Applicability Policy

For students newly admitted to the Business School and former students readmitted to the school after an absence of three semesters, applicable credits (business core and major core) up to eight years old will be counted toward business degree requirements. Courses more than eight years old will not count automatically, but can be evaluated individually for their current relevance to the degree program through a petition process with the dean's office. Approval for courses older than 8 years is not guaranteed so students may be required to update their knowledge by taking additional courses when past courses are outdated. Refer to the campus policy on age of applicable credits for CU Denver Core requirements and general electives.

****For questions, please contact your advisor.*

Academic Integrity And Discipline Policies

CU Denver Campus Policy 7050, Academic Integrity (https://www.ucdenver.edu/faculty_staff/employees/policies/Policies%20Library/7XXX%20Student%20Affairs/7050%20-%20Academic%20Integrity.pdf), defines academic misconduct and sets forth a uniform process for handling allegations of student academic misconduct at CU Denver. As members of the CU Denver community, students are expected to know, understand, and comply with the standards of the University and to accept the responsibility to maintain the highest standards of intellectual honesty and ethical conduct in completing all forms of academic work at the university. In particular, students must refrain from academic misconduct, defined in the policy as

1. a student's use of unauthorized assistance with intent to deceive an instructor or other person who is assigned to evaluate the student's work in meeting course and degree requirements, or
2. actions that interfere with the ability of the instructor to fairly judge the work of the student or other students.

Academic integrity standards assist in promoting an academically sound, fair, and respectful community. CU Denver views the Academic Integrity process set forth in this policy as a learning experience that can result in growth and personal understanding of one's responsibilities and privileges within both the CU Denver community and the greater community. All students must adhere to these standards. Students who allegedly violate these standards and commit academic misconduct will be subject to the procedures described in this policy. Academic dishonesty is academic in nature, and students are encouraged to contact their academic advisor for details of the campus policy and procedures centered on the academic integrity policy.

Forms of Academic Dishonesty (Refer to Campus Policy 7050 for more detailed definition)

Students are expected to know, understand and comply with the ethical standards of the university. Academic dishonesty is defined as a student's use of unauthorized assistance with intent to deceive an instructor or other such people who may be assigned to evaluate the student's work in meeting course and degree requirements. Examples of academic dishonesty include, but are not limited to the following:

1. *Plagiarism*

   Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. The incorporation of another person's work into one's own requires appropriate identification, regardless of the means of appropriation.
2. *Cheating*

   Cheating involves the possession, communication or use of information, materials, notes, study aids or other devices not authorized by the instructor in an academic exercise or communication with another person during such an exercise for the purpose of obtaining or providing unauthorized information or materials.
3. *Fabrication and Falsification*

   Fabrication involves inventing or counterfeiting information, i.e., creating results not obtained in a study or laboratory experiment. Falsification, on the other hand, involves the deliberate alteration or changing of results to suit one's needs in an experiment or other academic or creative exercises.
4. *Multiple Submissions*

   This is the submission of academic work for which academic credit has already been earned, when such submission is made without instructor authorization.
5. *Misuse of Academic Materials*

   The misuse of academic materials includes but is not limited to the following: stealing or destroying library or reference materials, computer programs, another student's notes or materials or illegitimate possession of examination materials, forgery, falsification of university documents.
6. *Complicity in Academic Dishonesty*

   Complicity involves knowingly allowing or contributing to another's academic misconduct.

School/College Specific Policy

BUSINESS SCHOOL

Students are expected to conduct themselves in accordance with the highest standards of honesty and integrity. Cheating, plagiarism, illegitimate possession and disposition of examinations, alteration, forgery, falsification of official records and similar acts or any attempt to engage in such acts are grounds for suspension or expulsion from the university. In particular, students are advised that plagiarism consists of any act involving the offering of the work of someone else as the student's own. It is recommended that students consult with the instructors as to the proper preparation of reports, papers, etc., to avoid this and similar offenses. Also, actions that disrupt the administrative process, such as misrepresentation of credentials or academic status, other forms of deception or verbal abuse of university staff are grounds for suspension or probation. All discovered acts of dishonesty must be referred to the campus Student Conduct and Community Standards.

Business Administration

Programs

- Accounting, BS in Business Administration (p. 163)
- Entrepreneurship, BS in Business Administration (p. 164)
- Finance, BS in Business Administration (p. 165)
- Financial Management, BS in Business Administration (p. 166)
- Human Resources Management, BS in Business Administration (p. 167)
- Information Systems, BS in Business Administration (p. 168)
- International Business, BS in Business Administration (p. 170)
- Management, BS in Business Administration (p. 171)
- Marketing, BS in Business Administration (p. 172)
- Risk Management and Insurance, BS in Business Administration (p. 173)
- Sports Business, BS in Business Administration (p. 175)

Minors

- Business Analytics Minor (p. 176)
- Business Fundamentals Minor (p. 177)
- Business Minor (p. 178)
- Entrepreneurship Minor (p. 179)
- Finance Minor (p. 180)
- Information Systems Minor (p. 181)
- Risk Management and Insurance Minor (p. 182)

Certificates

- Commodities Certificate (p. 184)
- Entrepreneurship Certificate (p. 185)
- Risk Management and Insurance Studies Undergraduate Certificate (p. 186)

Business (BUSN)

BUSN 1100 - College Success (1 Credit)
This course features skills, strategies, resources, dispositions, and behaviors that lead to success as a college student. In addition to practicing key academic proficiencies, such as writing, critical thinking, and analysis, students will learn to navigate the university system and utilize its support mechanisms and offices. BUSN 1100 will also feature a number of engaged learning strategies, including service learning, common intellectual experiences across sections, out-of-class engagement, self-reflection, and collaborative learning. The goal is to create capable, confident, and conscientious citizens of the CU Denver community. Restriction: Restricted to freshman level Business School majors. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to freshman level Business School majors.
Typically Offered: Fall, Spring.

BUSN 1110 - Intro to Investment Services Careers (1 Credit)
Open to all majors! Provides a comprehensive overview of careers in the Investment Services industry. Emphasis will be on interactions with industry professionals to provide hands-on knowledge and opportunities for in-depth discussion.Students are required to participate in a site visit to an investment services company during the course. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

BUSN 1200 - Career and Professional Development (3 Credits)
This first year course develops a student's professional skills, providing knowledge on key factors for early and long-term career success. Through applied learning and career-oriented experiences, the course covers: career and major exploration, student resources, resume writing, interview skills, business communications, professional etiquette, emotional intelligence, time management, ethical behavior, and workplace expectations. Students will have opportunities to develop their own professional network with business leaders as new members of the Business School. Restriction: Restricted to freshman level Business School majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to freshman and sophomore level Business School majors.
Typically Offered: Fall, Spring.

BUSN 2110 - Cultivating Emotional Intelligence (1 Credit)
This course delves into the social and emotional skills that sustain positive relationships at school and at work. It highlights the foundational and related skills of empathy and "emotional intelligence," also known as EQ, which refers to the skills of identifying and regulating our own feelings, tuning into the feelings of others, and understanding their perspectives, and using this knowledge to guide us toward constructive social interactions. We'll assess current emotional and social intelligence skills, and you will discover the Foundational 4 Quadrants of Emotional and Social Intelligence (ESI) to understand, use and manage emotions. Topics covered in this course apply to student academic success and personal and professional development. Restrictions: Restricted to undergraduate majors within the Business School. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors within the Business School.
Typically Offered: Fall, Spring.

BUSN 3110 - Career and Professional Development (1 Credit)
This course develops a student's academic and professional skills, providing knowledge on key factors for early and long-term academic and career success. Through applied learning and career-oriented experiences, the course covers: career and major exploration, student resources, resume writing, interview skills, business communications, professional etiquette, and workplace expectations. Students will have opportunities to develop their own professional network with other students and business leaders as new members of the Business School. Topics covered in this course apply to student professional development. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BUSN 4100 - Empowering Women in Business (3 Credits)
This course focuses on empowering women to advance in business. Focus on understanding gender equity issues, developing strong emotional intelligence and problem-solving skills and provides networking opportunities. Students will develop an understanding of the practical issues women face in business and effective skills to overcome roadblocks to advancement. Restriction: Restricted to students with Junior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall.

BUSN 4950 - Special Topics (1 Credit)
Research methods and results, special topics and professional development in business. Prerequisites vary according to topic and instructor requirements.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

Accounting (ACCT)

ACCT 2200 - Financial Accounting and Financial Statement Analysis (3 Credits)
The financial accounting process, the role of the profession and the analysis of financial statements. Principal focus on interpretation of financial statements, with emphasis on asset and liability valuation problems and the determination of net income. Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher.
Restriction: Restricted to undergraduate students at a sophomore standing or higher.

ACCT 2220 - Managerial Accounting and Professional Issues (3 Credits)
Introduces managerial accounting. Shows managers how to use accounting information to make decisions. Principal focus on cost behavior analysis, budgeting and product costing. Prereq: MATH 1070, or MATH 1060, or MATH 1080, or MATH 1110, or MATH 1120, or MATH 1130, or MATH 1401 with a grade of C- or higher and ACCT 2200 with a C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1070, or MATH 1060, or MATH 1080, or MATH 1110, or MATH 1120, or MATH 1130, or MATH 1401 with a grade of C- or higher and ACCT 2200 with a C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

ACCT 2550 - Introductory Accounting for Entrepreneurs and the Arts (3 Credits)
An integration of financial and managerial accounting processes as they relate to Entrepreneurs, Arts & Media managers and similar applications. This course will cover the analysis and interpretation of financial statements, asset and liability valuation and the determination of net income. Incorporates the use of accounting information to make decisions focusing on cost behavior analysis, budgeting and product costing in entrepreneurial and arts related businesses. Prereq: MATH 1070 or 1110. Max hours: 3 Credits.
Grading Basis: Letter Grade

ACCT 3220 - Intermediate Financial Accounting I (3 Credits)
A foundation course in financial accounting, this course provides an intensive analysis of generally accepted accounting principles, accounting theory and the construction and interrelation of financial statements for public corporations. Encourages critical thought and application of financial accounting standards to business transactions. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 3230 - Intermediate Financial Accounting II (3 Credits)
Continuing the intensive coverage of financial accounting from ACCT 3220/ACCT 6031, this course covers concepts of financial accounting theory and generally accepted accounting principles not covered in 3220/6031. This typically includes detailed coverage of liabilities and equity, especially the topics of leases, deferred taxes, pensions and stock-options. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 3220, completed with a grade of a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6032. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

ACCT 3320 - Intermediate Cost Accounting (3 Credits)
Cost accounting links financial and managerial accounting and emphasizes communication between accountants and managers. Topics include managerial uses of cost data for decision making, analysis of activities and cost behavior, the role of accounting in planning and control, and computer-assisted decision modelling. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6070. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

ACCT 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.

ACCT 4030 - Financial Accounting (3 Credits)
Analysis of financial accounting concepts, the development of accounting thought and principles and critical review of generally accepted accounting principles. (Not recommended for candidates planning to sit for the CPA examination.) Note: Students who have taken ACCT 3220 or ACCT 3230 (or equivalent) may not take this course. Prereq: ACCT 2200 and ACCT 2220 or equivalent. Must have a 'C' or better in courses. Strictly enforced. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors within the Business School.

ACCT 4054 - Accounting Information Systems (3 Credits)
This course focuses on the analysis, design, implementation and control of accounting information systems. Emphasis is placed on primary business processes including documentation, modeling, retrieving information to support managerial decisions and controlling risks. Topics include transaction cycles, relational database modeling, data analytics and information systems risks and controls. Must earn a grade of C or better to qualify for graduation at the UG level and to receive credit for the CPA license. Prereq: ACCT 3220 with a grade of C or higher and ISMG 2050 with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6054. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a grade of C or higher and ISMG 2050 with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4070 - Management Accounting (3 Credits)
Designed to provide students with a foundation in management accounting models and information, with emphasis on management decision making uses of accounting information. (Not recommended for candidates planning to sit for the CPA examination.) Prereq: ACCT 2200 and 2220 or equivalent with a grade of a 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Note: Students who have taken ACCT 3320 or its equivalent may not take this course. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ACCT 4240 - Advanced Financial Accounting (3 Credits)
Advanced financial accounting concepts and practices with an emphasis on accounting for equity investments, business combinations, and foreign currency. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3230 or ACCT 6030 or ACCT 6032 each with a grade of C or higher, or department consent. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3230 or ACCT 6030 or ACCT 6032 each with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4280 - Accounting Ethics (3 Credits)
This course examines the ethical responsibilities of accounting professionals from a personal and professional perspective, including examples of ethical dilemmas accounting professionals confront. The course utilizes various authoritative codes of conduct, professional standards and applied ethical theory as ethical guidance for auditors, accountants, tax professionals, and accounting management. A variety of case studies are employed to give students practice in developing a decision making approach in dealing with difficult ethical scenarios. Prereq: ACCT 4620. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq ACCT 4620 Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ACCT 4282 - Capitalism, Accounting and Ethical Choices (3 Credits)
Examines the development of the U.S. economy from 1850 to today with emphasis on the ethics of accounting, capitalism, and government controls. Prereq: ACCT 3220 with a C or higher or permission. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4330 - Managerial Accounting Problems and Cases (3 Credits)
Critical analysis of advanced topics in managerial accounting. Considerable use of cases and current readings. Prereq: Completion of ACCT 3320 with a grade of 'C'. Strictly enforced. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4370 - International Accounting (3 Credits)
Designed to expose students to the international aspects of accounting and financial management. Includes discussion of some of the different financial accounting practices across countries; financial statement analysis in a global context, international auditing practices and procedures, international tax implications and the implications of operating within the regulations of the Foreign Corrupt Practices Act, the European Union, North American Free Trade Agreement and General Agreement on Tariffs and Trade. Prereq: Completion of ACCT 3220 with a grade of 'C' or better. Strictly enforced. Cross-listed with ACCT 6370 and INTB 6370. Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ACCT 4410 - Fundamentals of Federal Income Tax (3 Credits)
Provisions and procedures of federal income tax laws and requirements affecting individuals and business organizations, including problems of tax planning and compliance. Note: Students cannot receive credit for both ACCT 4410 and ACCT 6140. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3220 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6140. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ACCT 4420 - Taxation of Business Entities (3 Credits)
A federal tax course stressing tax planning issues affecting corporations (both C corporations and S corporations) and partnerships. Note: A grade of C or higher must be earned to receive credit for the CPA license. Note: Students cannot receive credit for both ACCT 4420 and ACCT 6150. Cross-listed with ACCT 6150. Prereq: ACCT 4410 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 4410 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4442 - Accounting: Professional Research and Communications (3 Credits)
This course provides students with a structured approach to researching and communicating practice-oriented financial accounting, auditing, and tax-related issues. After completing this course, students should be able to effectively: (1) Communicate (both oral and written) solutions to practice-oriented financial accounting, auditing, and tax-related issues. (2) Navigate through U.S. and international accounting, auditing, and tax authorities. (3) Conduct systematic research for all types of accounting-related problems then reach and communicate efficient conclusions using a variety of techniques. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Prereq: ACCT 4620 and ACCT 4410 both with a grade of C or higher. Cross-listed with ACCT 6442. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher Prereq: ACCT 4620 and ACCT 4410 both with a grade of C or higher

ACCT 4490 - Experiential Learning (3 Credits)
Designed to provide practical knowledge on developing a professional practice in accounting or financial management. Topics: Marketing, operating a professional practice. Lectures, guest speakers student projects. Prereq: ACCT 3220 completed with a 'C' or better, or permission of instructor. Cross-listed with ACCT 6490. Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4520 - Oil and Gas Accounting (3 Credits)
The Oil and Gas Accounting course is designed to give students an overview of the oil and gas industry and the particular accounting issues this industry faces. The focus is on the oil and gas industry but many of the issues discussed are appropriate and applicable to all energy-related entities. This is a valuable learning experience for those interested in acquiring an understanding of the accounting issues for energy management firms in preparation for entry into public accounting. The course enjoys support from the energy industry in the form of guest speakers and project ideas. Prereq: ACCT 3220 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6520. Max Hours: 3 credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4620 - Auditing Theory (3 Credits)
Auditing Theory: Focus on the professional responsibilities of CPAs, generally accepted auditing standards, and PCAOB auditing standards, with emphasis on the theory underlying the development of standards, objectives and procedures. Students cannot receive credit for both ACCT 4620 & ACCT 6020. Note: A grade of C or higher must be earned to receive credit for the CPA license. A grade of B or higher must be earned if planning to take 6025 in the future. Prereq: ACCT 3220 with a grade of C or higher. Coreq: ACCT 4054. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a grade of C or higher. Coreq: ACCT 4054. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ACCT 4625 - Auditing Practice (3 Credits)
Focus on the application of generally accepted auditing standards and PCAOB auditing standards to practice. Emphasis on procedures used by CPAs to gather and document audit evidence. Prereq: ACCT 4620 with a grade of C (2.0) or higher. Note: A grade of C or higher must be earned to receive credit for the CPA license. Note: Students cannot receive credit for both ACCT 4625 and ACCT 6025. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 4620 with a grade of C (2.0) or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

ACCT 4780 - Accounting and Information Systems Processes and Controls (3 Credits)
The course is designed to develop knowledge and skills used to understand and evaluate corporate accounting processes and systems. It focuses on financial and information system internal controls and the flow of corporate information through an accounting system. A financial system objective and risk assessment approach is used to present concepts and techniques for evaluating the adequacy of system processes and controls. Cross-listed with ACCT 6510, ISMG 4780, and ISMG 6510. Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT 3054 with a grade of 'C' or better (strictly enforced). Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ACCT 4800 - Accounting for Government and Nonprofit Organizations (3 Credits)
Planning and control of government and nonprofit organizations. Includes program budgets, responsibility accounting and fund accounting. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3220 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 8 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4900 - Professional Certification in Accounting (3 Credits)
This course will prepare students for the Uniform Certified Public Accountant Examination, including the Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting (FAR), and Regulation (REG) sections. Topical coverage will include a balance of most-tested topics, difficult topics, and exposure to topics not addressed in required accounting degree courses. Note: there will be a materials fee of $1,100 for this course. All materials will continue to be available until successful passage of the CPA Exam. Note: Undergraduate Accounting students typically perform better in this class when taking it during the final semester prior to graduation. Restriction: Restricted to Undergraduate and MS Accounting students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Undergraduate and MS Accounting students.

ACCT 4915 - Accounting for the Public Interest (3 Credits)
Applies accounting knowledge and concepts in a not-for-profit organization. Student volunteers help with functions or special projects and are supervised by both faculty members and personnel from the agency to which they are assigned. Prereq: Permission of instructor. Cross-listed with ACCT 6015. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

ACCT 4950 - Special Topics (3 Credits)
Research methods and results, special topics and professional developments in accounting. Consult the current 'Schedule Planner' for semester offerings. Prereq: Varies according to topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to undergraduate majors within the Business School.

Business Analytics (BANA)

BANA 2010 - Business Statistics (3 Credits)
Basic principles of probability and statistics with applications in business. Includes descriptive statistics, probability and probability distributions, data collection, sampling distributions, statistical inference, simple regression and the use of a computer to perform statistical analysis. Students are required to present their analyses in written and/or oral form and defend their conclusions. This is a business core course. Therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements and prerequisites for other business courses. Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher.

BANA 3000 - Operations Management (3 Credits)
Introduces the concepts and methods commonly used in manufacturing and service operations. Topics include aggregate planning, inventory control, scheduling, quality control, and linear programming. This is a business core course. Therefore a grade of a 'C' or better must be earned to satisfy Business graduation requirements. Prereq: BANA 2010 and ACCT 2200 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010 and ACCT 2200 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate students at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

BANA 4110 - Business Analytics Process (3 Credits)
This course introduces the processes, tools, and techniques essential to Business Analytics. Students will learn about the business analytics life cycle. Along the way, students will learn about database access tools, and extracting, transforming, and loading data sets (ETL). This is followed by exploratory data analysis (EDA). Students will learn fundamental programming concepts and common syntax for the Python programming language to construct models and propose business solutions. Throughout this process a variety of data visualization methods will be used, and the use of clear and impactful data storytelling will be emphasized. Prereq: BANA 2010. Restriction: Restricted to students with Junior status. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010. Restriction: Restricted to students with junior status.
Typically Offered: Fall.

BANA 4120 - Forecasting Techniques (3 Credits)
This course will explain and utilize popular time series techniques, as well as cross-sectional forecasting techniques. Students will learn forecasting methodologies applicable to marketing, finance, accounting, human resources management, as well as supply chain and production management decision-making. This course focuses on practical applications of forecasting techniques, choosing and comparing appropriate methods, and applying the results to workplace situations. Students will utilize Excel for data-based forecasting tasks, as well receive some exposure to utilizing R and SAS analytics software packages. Other topics may be covered, as time and student interest allows. Prereq: BANA 2010. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010.
Typically Offered: Fall, Spring.

BANA 4840 - Independent Study (3 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

BANA 4950 - Special Topics in Business Analytics (3 Credits)
Course offered on an irregular basis for the purpose of presenting new subject matter in Business Analytics. Prereq: Will vary depending upon the particular topic and instructor. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Business Law (BLAW)

BLAW 3050 - Business Law and Ethics (3 Credits)
Students are taught to identify & resolve legal and ethical issues. Topics include contracts, torts, criminal law, constitutional law, business organizations,employment law, intellectual property and real property law. This is a business core course therefore a grade of "C" or better must be earned to satisfy Business graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

BLAW 3100 - Legal and Ethical Implications of Risk (3 Credits)
Topics include contracts, torts, constitutional law, intellectual property, agency, business organizations, employment law, and real property law. Special focus is placed on the relationship between insurance and risk and the topics covered. May be taken in lieu of BLAW 3050. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

BLAW 4121 - Legal and Ethical Implications of Risk (3 Credits)
Skills in legal and factual analysis and the application of ethical theories are advanced and refined through cases. Topics: insurance law, personal property and intellectual property law,agency, business entities, securities,employment law, and consumer law. Focus is placed on the relationship between insurance, risk and the covered topics. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

BLAW 4140 - Negotiation Skills/Property: Effective Strategies (3 Credits)
Course covers real and personal property law, including ownership, title, landlord/tenant, easements, environmental law, and zoning. Emerging issues in intellectual property are also reviewed, including U. S. law and international treaties and agreements. Negotiation techniques through role-playing are emphasized. NOTE: This course is an elective course and my not be used to fulfill the CORE BLAW 3050 course. Meets concurrently with MGMT 4140. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Business Minor (BMIN)

BMIN 1000 - Introduction to Business (3 Credits)
The business and economic landscape is introduced illustrating the challenges and opportunities in today's business environment. A foundation in traditional business disciplines is introduced including the principles and terminology employed in Marketing, Management, Finance, Accounting, Operations, and Economics. This course is cross-listed with MGMT 1000. Restriction: Students enrolled in the Business School are not eligible for this course. Note: Students seeking a Minor in Business Fundamentals are encouraged to enroll in BMIN 1000 as their first course. However, BMIN 1000 may be taken as a co-requisite with BMIN 3001, 3002 or 3003 or ENTP 3000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course.

BMIN 1010 - Introduction to Business -- Career Planning (3 Credits)
Students will explore their best career choices based on assessments and their personality type. They will learn what strengths they bring to a team and to their individual management style utilizing the Myers Briggs Type Indicator and Strong Interest Inventory assessments. Topics covered include: career exploration, career and internship planning, personality styles and strengths, working with executives, corporate culture overview, business trends and news, and analysis of Fortune 100 companies. Supplemental topics include: resume writing, effective interviewing, time management, business writing and hiring trends. Restriction: Students enrolled in the Business School are not eligible for this course. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course

BMIN 3001 - Fundamentals of Management and Marketing (3 Credits)
Comprised of two modules focusing on essential concepts of Management and Marketing: 1) Management: Including organizational behavior concepts, leadership, management skills and methods and team dynamics 2) Marketing: Students will develop a new product marketing plan including, industry and market research, market segmentation, marketing mix planning and implementation strategies. Restriction: Students enrolled in the Business School are not eligible for this course. Coreq: BMIN 1000 or MGMT 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Co-req: BMIN 1000 or MGMT 1000

BMIN 3002 - Fundamentals of Accounting and Finance (3 Credits)
Comprised of two modules focusing on essential concepts of 1) Accounting: including the use of information in financial reports and in making business decisions, and 2) Finance: including financial markets, capital structure, time-value of money, valuation and capital budgeting. Restriction: Students enrolled in the Business School are not eligible for this course. Coreq: BMIN 1000 or MGMT 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Co-req: BMIN 1000 or MGMT 1000

BMIN 3004 - Principles of Strategic Management (3 Credits)
Students will examine the critical issues related to running sustainable businesses. Using the strategic management model as a framework, the course focuses primarily on developing and implementing corporate strategy. Topics covered include mission, vision and values; corporate social responsibility; competitive analysis; leveraging core competencies; developing a business model, and creating value. Supplemental topics include how to create competitive advantage through innovation, choosing an appropriate legal business entity, and managing risk. This is a capstone course and synthesizes key concepts from other Cohort Business Minor courses including entrepreneurship, accounting & finance, management, and marketing. Restriction: Students enrolled in the Business School are not eligible for this course. Prereq: BMIN 3001, BMIN 3002, Junior-Level Standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Prereq: BMIN 3001, BMIN 3002, Junior-Level Standing

Commodities (CMDT)

CMDT 1000 - Introduction to Commodities (1 Credit)
Introduction to Commodities will expose students to the business side of commodity markets – energy, minerals and agriculture. Students will learn about potential career options in commodities including risk management, supply chain, trading, and investment analysis. Students will have the opportunity to access various state of the art learning technologies that the J.P. Morgan Center for Commodities offer, such as: Bloomberg, Morningstar, and CQG through live demonstrations. This class will have the opportunity to meet and interact with guest speakers and industry executives as well as attend field trips to various commodity sites. Examples may include visiting Newmont Mining's gold mine in Cripple Creek and visiting Excel Energy and/or Ardent Mills' trading floors in downtown Denver to further learn the business skills required for these types of positions. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

CMDT 2100 - The Future of Energy (3 Credits)
This class provides students with an introduction to energy and how it supports our everyday lives, from how these sources powers our homes, drives the food we eat, the clothes we wear and enables our mobility. Students will gain understandings of the various forms of energy, including both non- and renewable sources, including how these are produced, transported, traded, and consumed here in Colorado, in the U.S. and around the world. Students will explore key topics including energy emissions, climate change as well as topical geopolitical events related to energy. Importantly, students will research and provide opinions on realistic scenarios and opportunities that we may expect for our energy future. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CMDT 4490 - Commodity Trading (3 Credits)
This is a co-listed class with the J.P. Morgan Center for Commodities and the Finance Department. This course focuses on how securities and futures contracts are designed and traded including trading exchange operations, regulation, trading mechanisms and processes. Students will learn the theory and practice of securities and futures contract trading with a focus on hands-on trading experience using industry software (CQG and Bloomberg) as well use of data sources (Morningstar). In this course, we will review the origins of liquidity, volatility, price efficiency, and trading profits. Next we will cover a host of topics concerning equity and commodity trade execution strategies, such as why and how investors trade, what and when investors profit from investing and speculating, the key principles of high-frequency trading and investor's overconfidence, why market institutions are organized as they are, and the role of public policy in the markets. Cross-listed with CMDT 6490, FNCE 4490 and FNCE 6490. Max hours: 3 Credits.
Grading Basis: Letter Grade

CMDT 4582 - Commodity Supply Chain Management (3 Credits)
This course introduces the design, analysis, management, and control of supply chains as applied to commodities. The course covers integration of processes and systems, relationship management of upstream and downstream supply chain players, and commodity- specific supply chain strategies. Cross-listed with CMDT 6582. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

CMDT 4682 - Commodity Valuation and Hedging (3 Credits)
This course is a practical introduction to commodity markets. Students will learn how commodities are managed in the global markets from a hedgers, speculators and arbitrageurs point of view. Understanding the relationships between commodities and the global economy will be investigated. In addition, commodities will be looked at as an asset class and cross-asset relationships will be studied. Students will be introduced to futures and options markets analysis deploying strategies professional traders use in diverse market conditions. Students will work with the various trading software throughout the course and gain proficiency in real-world trading. Cross-listed with CMDT 6682. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

CMDT 4782 - Commodity Data Analysis (3 Credits)
This course is an applied introduction commodity data analysis. Students will learn how to analyze commodity prices using quantitative and qualitative techniques. Relationships between commodities and the global economy will be investigated. In addition, commodities will be looked at as an asset class and cross-asset relationships will be studied. Students will be introduced to forecasting techniques and be able to develop and evaluate various forecasting models. Students will work with the open source Python software throughout the course and gain proficiency. Topics include: regression analysis, univariate models, non-stationarity, vector autoregressions, cointegration, volatility modeling, principal component analysis, Python programming, and other topics time permitting. Cross-listed with CMDT 6782. Max hours: 3 Credits.
Grading Basis: Letter Grade

CMDT 4802 - Foundations of Commodities (3 Credits)
This course introduces students to the physical aspects of commodities and connects them to the financial markets in which commodities are traded. Fundamental concepts and terminology necessary for understanding commodity production, transportation, economics, financial analysis and marketing are described. Supply chains for several specific commodities are reviewed in detail, as examples of the production and market structure knowledge needed to be successful professional participants in commodity trading capacities. The course also serves a foundation for more focused education in the specific commodity sectors, as well as the applied use of marketing and financial trading concepts learned in other courses. Cross-listed with CMDT 6802 and FNCE 4802/6802. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

Entrepreneurship (ENTP)

ENTP 1001 - Business Bound (1 Credit)
Junior Achievement and the Jake Jabs Center for Entrepreneurship offer this summer camp experience for high school students. Students will earn 1 college credit hour while learning what it takes to be an entrepreneur. They'll hear from some of the most successful entrepreneurs and business leaders from across the state as they consider a path for their future. The week will culminate with a competition where one team will be crowned the JA Titan of Business. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory
Typically Offered: Summer.

ENTP 3200 - Essentials in Entrepreneurship (3 Credits)
This course provides an introduction to, and an overview of, the fundamentals of entrepreneurship. Whether you already have an idea and are eager to start your own business, or simply want to learn more about what an entrepreneurial career in a dynamic startup eco-system (like Denver) would be like, this course exposes you to the joys and challenges of entrepreneurship—from conceptualizing new ventures to developing, marketing, vetting, pitching, funding, and managing them. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENTP 3201 - Lean Startup Fundamentals (3 Credits)
Get to know the Lean Startup method, an emerging paradigm for developing and launching new businesses and products. This methodology focuses on experimentation, customer feedback, and iterative design to increase a venture's competitive advantage and chances of success. Course topics include the Lean Startup method's history and benefits, as well as how to test hypotheses, collect data, create a minimal viable product, accelerate growth, pivot, and more. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENTP 3210 - Visionary Leadership for New Ventures (3 Credits)
This course provides students with an overview of key leadership principles for creating strategy and managing teams in a startup environment. It introduces leadership concepts critical to gaining true organizational commitment and focuses on case studies relevant to common business issues. By exploring what entrepreneurial leaders actually do and how visionary leadership is required to grow a venture, students will learn how to execute these concepts through measurable goals and objectives. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

ENTP 3230 - Small Business Accounting and Finance (3 Credits)
This course covers key financial topics such as financial reporting, cash flow analysis, financial planning, budgeting, working capital management, asset decisions, obtaining capital, business valuation, source of funds for raising capital, franchising, and other topics relevant to entrepreneurial finance. This course counts as a pre-req to ENTP#3299. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENTP 3240 - Developing Dynamic Concepts (3 Credits)
This course is designed to prepare entrepreneurial-minded students to critically and objectively evaluate the feasibility of their ideas. Entrepreneurs are motivated by plethora of "the next big idea" and are often fatally optimistic about their ideas. The course work will demonstrate how to objectively test and validate the feasibility of an entrepreneurial idea through data-driven analytical and strategic planning. Additionally, this course will provide pragmatic applications of the course content by incorporating real-life case studies presented by practicing entrepreneurs as guest lecturers. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 3260 - High Impact Sales for Entrepreneurs (3 Credits)
If you want to have a successful business, selling is non-negotiable. The purpose of this course is to demystify sales and help you understand strategies and tactics for effective selling in both pre-revenue and post-revenue entrepreneurial environments. The course empowers you to learn effective selling through knowledge, skill, and discipline and thereby master the art of conversion. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENTP 3299 - Business Model Development & Planning (3 Credits)
At the heart of every great business is a well thought-out business plan. This course teaches entrepreneurially-minded students how to create one, and students will tackle this project with a team or as an individual. Local entrepreneurs and investors will serve as guest speakers and share their experiences. Mentors and advisors associated with the Jake Jabs Center, as well as special Center-organized experiential events, will provide students with practical feedback. Prereq: ENTP 3230 or ACCT 2200 with a grade of C- or higher is required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3230 or ACCT 2200 with a grade of C- or higher is required.
Typically Offered: Spring.

ENTP 3900 - Experiential Topics in Entrepreneurship (3 Credits)
In Colorado's thriving entrepreneurial ecosystem, aspiring entrepreneurs need guidance, inspiration, networks, experiential events, and practice before launching a successful startup. This course will help you cultivate an entrepreneurial mindset and skillset that will not only empower you to create your own business but also stand out as a desirable job candidate to Colorado's many innovative companies. Learn from today's leading, most disruptive founders as you hear their stories and visit their businesses, and then develop your own idea with a team of your peers. Typically offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4028 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Students can register for ENTP 4028 twice as long as they are for two different trips (for example: Cuba and Barcelona). Cross-listed with ENTP 6028, INTB 4028, and INTB 6028. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Global Education Study Abroad.
Typically Offered: Spring, Summer.

ENTP 4200 - Mission Driven Entrepreneurial Mindset (3 Credits)
The course is designed to teach students to rethink the common market driven approach to innovation, with a mission driven focus. In this course, students will learn that impact innovation exists in the public, private and non-profit sectors. Completing this course will dispel the idea that purpose driven innovation only exists in the non-profit realm. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4840 - Entrepreneurship Independent Study (1-3 Credits)
This course is intended for research or other unique circumstances. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4950 - Special Topics (3 Credits)
A variety of topics in entrepreneurship are offered. Consult the current "Schedule Planner" for semester offerings. Prereq: Topics vary.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Finance (FNCE)

FNCE 1001 - Financial Literacy for Business (1 Credit)
The five day workshop on financial literacy will provide students with the opportunity to build a basic financial literacy toolkit, including managing your money, mastering credit & debt, investing, and planning for the future. Students will also learn about business in Denver. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Summer.

FNCE 1500 - Introduction to Investment Services (1 Credit)
This class provides students with a broad overview of career opportunities in finance, focusing on financial services and banks. We first introduce several career paths in finance, and then briefly introduce the origins of money and banking. We turn to an in-depth study of the financial services industry, including the services provided by companies and listing financial services products as well as who develop and regulates those services. We map the skills (technical and personal) that are required for an individual to succeed in the industry. The course will have a special focus in companies in Colorado and the Colorado Investment Service Coalition (CISC). We close the course with mapping key ethics in the financial services industry. The course will address the full range of financial services careers, including investment and commercial banking, insurance, pension plans, risk management, mutual funds, e-commerce, and personal and business planning. Max hours: 1 Credit.
Grading Basis: Letter Grade

FNCE 2939 - Internship (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

FNCE 3000 - Principles of Finance (3 Credits)
This course provides an introduction to financial markets and institutions, financial statement analysis, interest rates and the time value of money, principles of security valuation, concepts of risk and return, and capital budgeting. Note: This course is required in the Business Core. A grade of 'C' or better must be earned. Prereq: MATH 1070 or MATH 1060 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401, AND ACCT 2200, AND DSCI/BANA 2010 or ECON 3811 all with a grade of C- or higher, AND ECON 2012 AND ECON 2022. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1070 or MATH 1060 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401 AND ACCT 2200 AND DSCI/BANA 2010 or ECON 3811 all with a C- or higher AND ECON 2012 AND ECON 2022. Rest: Restricted to undergrad students at junior standing or higher.

FNCE 3500 - Management of Business Capital (3 Credits)
Students learn the basic principles governing the management of capital in the business firm. Topics include management of working capital, cost of capital, capital budgeting, firm valuation, and theory and management of capital structure, grade of 'C' must be earned to take subsequent courses for which this course is a prereq. Prereq: FNCE 3000 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 3600 - Financial Markets and Institutions (3 Credits)
Focuses on the supply and demand for loanable funds, the process of money creation, the structure of interest rates, and the role of banks and the Federal Reserve in the financial system. Special attention is devoted to the impact of monetary and fiscal policies on interest rates, the flow of funds and economic activity; and the operation of financial markets and institution. Prereq: FNCE 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

FNCE 3700 - Investment and Portfolio Management (3 Credits)
In this course students learn about the different types of investment vehicles, including methods to estimate their value and analyze their risk. They will also be introduced to portfolio management, including the identification of objectives and constraints and the analysis and use of investment information. Topics include the functioning of security markets, asset allocation, security valuation, and portfolio analysis. A grade of 'C' or better must be earned to receive credit for the course, and to take subsequent courses for which it is a prerequisite. Note: FNCE 3700 and FNCE 3600 may be taken concurrently. Prereq: FNCE 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 3840 - Independent Study: FNCE (1-3 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4370 - International Financial Management (3 Credits)
Financial management in the international environment. Topics include international capital movements; international operations as they affect the financial functions; foreign and international institutions; and the foreign exchange process. Also considers foreign exchange theory and risk management, financial requirements, problems, sources, and policies of firms doing business internationally. Cross-listed with INTB 4370. Prereq: FNCE 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 4382 - Survey of Financial and Commodity Derivatives (3 Credits)
This course introduces forward contracts, used in price risk management for millennia. We cover the properties of forward/futures contracts, structure of the markets and strategic implications for speculation and hedging. We price forwards from spot price, and introduce convenience yield. Options used for insurance purpose (think of your car insurance as a put option) is a more expensive way to manage risk; we cover option strategies and basic pricing. The course concludes with swaps, credit derivatives and structured products. Asset classes covered are equity, fixed income, currency, agriculture, energy (oil/gas and electricity) and metal/mining. Prereq: FNCE 3500 and FNCE 3700 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 and 3700 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 4411 - International Corporate Governance (3 Credits)
Discusses the structure and goals of the modern corporation, the primary governance mechanisms used to help companies achieve these goals, and how and why these roles, goals, and mechanisms vary across nations. The topics covered in the course include managerial compensation, board of director structure and ethics, shareholder activism, and how governance structures differ across countries. Prereq: FNCE 3000. Cross-listed with FNCE 6411 and INTB 6411 Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000

FNCE 4424 - Corporate Restructuring (3 Credits)
Examines the processes and decisions by which mergers, takeovers and other corporate restructuring ace, the transactions occur. Analyzes merger and acquisition decisions as part of strategic decision making, and how firms are valued in mergers. Discusses the market for corporate control and the public policy implications of mergers and corporate governance. Prereq: FNCE 3500. Restriction: Restricted to undergraduate Business majors with a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 Requisite: Restricted to undergraduate Business majors with a junior standing or higher

FNCE 4470 - Behavioral Finance (3 Credits)
Over the past several decades, the field of finance has developed a successful paradigm based on the notions that investors and managers were generally rational and the prices of securities were generally “efficient.” In recent years, however, anecdotal evidence as well as theoretical and empirical research has shown this paradigm to be insufficient to describe various features of actual financial markets. In this course we examine how the insights of behavioral finance complements the traditional paradigm and sheds light on the behavior of asset prices, corporate finance, and various Wall Street institutions and practices. Prereq: FNCE 3500 with a C or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 with a C or higher

FNCE 4480 - Introduction to Financial Modeling (3 Credits)
Develops and implements financial models for purposes of financial planning and decision making. This course seeks to increase students' knowledge and skill in the development of basic Excel-based financial planning models, including cash budgets, financial statements, and capital budgeting analysis. The course also introduces Monte Carlo simulation using Palisade Corporation's @RISK software. Knowledge of computer and spreadsheet software needed. Restriction: Restricted to undergraduate Business majors at a junior standing or higher Prereq: FNCE 3000, FNCE 3500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 and FNCE 3500. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 4490 - Commodity Trading (3 Credits)
This is a co-listed class with the J.P. Morgan Center for Commodities and the Finance Department. This course focuses on how securities and futures contracts are designed and traded including trading exchange operations, regulation, trading mechanisms and processes. Students will learn the theory and practice of securities and futures contract trading with a focus on hands-on trading experience using industry software (CQG and Bloomberg) as well use of data sources (Morningstar). In this course, we will review the origins of liquidity, volatility, price efficiency, and trading profits. Next we will cover a host of topics concerning equity and commodity trade execution strategies, such as why and how investors trade, what and when investors profit from investing and speculating, the key principles of high-frequency trading and investor's overconfidence, why market institutions are organized as they are, and the role of public policy in the markets. Cross-listed with CMDT 4490, CMDT 6490 and FNCE 6490. Max hours: 3 Credits.
Grading Basis: Letter Grade

FNCE 4500 - Corporate Financial Decisions (3 Credits)
This is a required capstone course for the financial management emphasis. It uses the case method to develop the analytical and decision making skills of students. Students are required to apply theories and concepts learned in previous finance and accounting classes to real world scenarios. Topical coverage includes financial analysis, planning, control, working capital management, long-term investment and financing decisions and corporate valuation. A grade of 'C' or better must be earned to receive credit towards graduation. Prereq: MATH 1060 or 1070 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401 AND DSCI/BANA 2010 AND ACCT 2200 all with a C- or higher; ECON 2012 AND ECON 2022 with a D- or higher; FNCE 3000 AND FNCE 3500 AND FNCE 3700 all with a C or higher. Restriction: Restricted to undergraduate students at a senior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060 or 1070 or 1110 or 1080 or 1130 or 1401 AND DSCI/BANA 2010 AND ACCT 2200 with a C- or higher; ECON 2012 AND 2022 with a D- or higher; FNCE 3000 AND 3500 AND 3700 with a C or higher. Restriction: undergraduate seniors or higher.

FNCE 4709 - Life and Health Insurance (3 Credits)
The course is designed to provide the student with the basic understanding of life and health insurance concepts. The course will focus on a needs analysis for individual life insurance needs in preserving an estate or creating an estate. We also focus on the needs of the family and the preservation of the income stream for meeting short and long term needs and how we accomplish this via life insurance. We also will look at life insurance in terms of business planning using such concepts as key person life insurance, funding buy sell agreements, and related needs. On the health side, we will use a needs analysis approach to provide health coverage for the individual and family. We also explore the employee benefits arena and how businesses will focus on providing group medical coverage and related benefits in an ever changing health care environment with health care reform being phased in. We also will explore the internal workings of life and health insurance companies by review. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4750 - Business Intelligence and Financial Modeling (3 Credits)
This course will introduce students to the application of business intelligence in a corporate finance setting. Financial data intelligence is essential for effective decision making throughout the firm, in finance directly and in other functions supported by the finance department. Strategy setting, budgeting, and new product development are just a few decision areas where finance personnel play an active role. In this course, we learn how to apply business intelligence software tools to enable finance personnel to access and analyze corporate data in support of critical decision making across the enterprise. Students will also analyze data through the use of financial models built in Microsoft Excel. The development of complex financial models will provide students with valuable hands-on experience with a software tool used widely incorporate finance departments. Prereq: ISMG 2050 with a grade of C- or higher, FNCE 3000 and (ISMG 3000 or ACCT 4054) all with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ISMG 4750 and ISMG 6820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a grade of C- or higher, FNCE 3000 and (ISMG 3000 or ACCT 4054) all with a grade of 'C' or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 4802 - Foundations of Commodities (3 Credits)
This course introduces students to the physical aspects of commodities and connects them to the financial markets in which commodities are traded. Fundamental concepts and terminology necessary for understanding commodity production, transportation, economics, financial analysis and marketing are described. Supply chains for several specific commodities are reviewed in detail, as examples of the production and market structure knowledge needed to be successful professional participants in commodity trading capacities. The course also serves a foundation for more focused education in the specific commodity sectors, as well as the applied use of marketing and financial trading concepts learned in other courses. Cross-listed with FNCE 6802 and CMDT 4802/6802. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4840 - Independent Study: FNCE (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4880 - Ethics in Finance (3 Credits)
The undergraduate business finance student develops an in-depth knowledge of ethical parameters for business and finance decision making. The course addresses the ethics issues with a heavy emphasis on finance, but also includes discussion and analysis of general ethics frameworks, ethics and internal controls, and the relationship of finance law and ethics. The influence of ethics on an organization's decision-making is stressed. Case studies and current issues in finance ethics will be addressed. Restriction: Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.

FNCE 4950 - Special Topics (1-3 Credits)
Research methods and results, special topics and professional development in finance. Prerequisites vary according to topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

International Business (INTB)

INTB 1000 - Special Topics (3 Credits)
This topics course at the 1000 level is designed to offer flexibility for the International Business department for lower division special topics classes that are occasionally offered. Students may enroll up to 3 times to total no more than 9 credits but the topics must differ for each course. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

INTB 1111 - International Social Entrepreneurship (3 Credits)
The end of the 20th Century saw the rise of a powerful new force: the International Social Entrepreneur. Leveraging the power of market forces, social media, the internet, and the desire to make the world better, these people have developed powerful ways to tackle the social, economic, and environmental problems that confront us all. In this class, we will study the rise of international social entrepreneurship, and the innovative tools international social entrepreneurs have developed to address some of our most dire challenges. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

INTB 2939 - Internshp (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.

INTB 3000 - Global Perspectives (3 Credits)
Globalization brings both opportunities and anxieties that need to be fully explored, discussed and understood both by the business and non-business student. This interdisciplinary course is designed to stimulate thought, perspective, discussion and debate for business and non-business students on issues ranging from globalization; political economy and geopolitics; the environment; cultures; finances; economic integration; trade; global regions; emerging markets; human rights; terrorism and conflict; leadership, ethics and values; entrepreneurship, to future trends in global issues. The Global Perspective course is designed (1) to increase and promote both business and non-business students' capacity for international understanding and international enterprise through the study and discussion of global business environment-related issues from multiple points of views in a neutral forum. (2) It is to provide students with the awareness that global issues cannot be viewed in isolation, Restriction: Restricted to undergraduate majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Additional Information: Denver Core Requirement, International Perspectives.

INTB 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4028 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with ENTP 4028, ENTP 6028, and INTB 6028. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4200 - International Marketing (3 Credits)
Studies managerial marketing policies and practices of firms marketing their products in foreign countries. Analytical survey of institutions, functions, policies, and practices in international marketing. Relates marketing activities to market structure and environment. Cross-listed with MKTG 4200. Prereq: MKTG 3000 with a C- or higher. Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a C- or higher.
Additional Information: Denver Core Requirement, International Perspectives.

INTB 4370 - International Financial Management (3 Credits)
Financial management in the international environment. Topics include international capital movements; international operations as they affect the financial functions; foreign and international institutions; and the foreign exchange process. Also considers foreign exchange theory and risk management, financial requirements, problems, sources, and policies of firms doing business internationally. Cross-listed with FNCE 4370. Prereq: FNCE 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

INTB 4400 - Environments of International Business (3 Credits)
An overview of the environmental complexities that arise when business activities and firms cross national borders. Key international business environmental complexities associated with country differences, cross-border trade and investment, and global monetary system are examined. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level. Cross-listed with MGMT 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level.

INTB 4410 - Operations of International Business (3 Credits)
Focuses on the impact of environmental factors on international business operations and the identification and analysis of complex strategic and operational issues facing business firms in global markets. The strategies and structures of international businesses, alternative foreign market entry modes, and the unique roles of various business functions at international business firms are explained and assessed. Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 4410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

INTB 4840 - Independent Study (1-8 Credits)
Instructor approval required. Allowed only under special and unusual circumstances. Regularly scheduled courses cannot be taken as independent study. Restriction: Restricted to undergraduate business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4950 - Special Topics in International Business (3 Credits)
Current topics in international business are occasionally offered. Consult the 'Schedule Planner' for specific course offerings or contact an advisor for information. Prereq: Topics vary depending on the topic and the instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Information Systems (ISMG)

ISMG 2050 - Business Problem Solving Tools (3 Credits)
This course focuses on the technology and problem-solving skills necessary for students to succeed both at school and in the business world. This course teaches how to make business decision using spreadsheets, databases and web tools. Students solve problems in statistics, accounting, finance, marketing, management and information systems. The objective is to provide students with problem solving methods and tools necessary to succeed in the business community. Restrictions: As a business core course, a grade of a 'C-' or better must be earned to satisfy Business graduation and prerequisites for other business courses. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 2075 - Introduction to Business Data (1 Credit)
Introduction to Business Data prepares students to use data sources to analyze and solve real-life business problems. It challenges students to use critical thinking and analysis to find efficient and effective solutions to real-life business situations. Students will use data to solve problems in accounting, finance, and information systems. It is intended for business students that have not satisfied the business data requirements of ISMG 2050. Prereq: Computer Competency and prior coursework covering spreadsheet software. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 2800 - Designing for the Web (3 Credits)
Students examine how the Web is evolving to support a variety of business needs. The course covers the design and usability principals necessary for improving online interactions via traditional websites as well as using technologies promoting collaboration and information sharing (e.g. social networks, blogs, wikis, forms). Topics include: the principles of web page and web site design; hypertext markup language, cascading style sheets, streaming video, online collaboration technologies; client and server scripting; and the process of testing and publishing web sites. Coreq: ISMG 2050. As a corequisite, ISMG 2050 can be taken concurrently or completed prior. If completed prior, must earn a C- or higher. Restriction: Restricted to undergraduate Business majors at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ISMG 2050. If completed prior, must earn a C- or higher. Restriction: Restricted to undergraduate Business majors at a sophomore standing or higher.
Typically Offered: Spring.

ISMG 3000 - Technology In Business (3 Credits)
Provides an introduction on how various technologies are utilized by organizations to drive business decisions and gain a competitive advantage. Students will learn how organizations can leverage information technology to streamline operations and become more efficient & effective. Students will be exposed to the concepts of: artificial intelligence, business intelligence, cybersecurity, data and information, e-business, ethical use of data, enterprise information systems, organizational responsibilities related to information technology, project management, systems development life cycle, and wireless communications. Note: Business core course therefore a grade of a "C" or better must be earned to satisfy graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Typically Offered: Fall, Spring.

ISMG 3050 - Intermediate Excel for Business (1 Credit)
Spreadsheet software remains one of the essential digital skills required by businesses. In this course, you will learn key Excel skills including creating charts/graphs, filtering information, using pivot tables to summarize data, mastering Excel functions including sumif, countif, and vlookup. Cross-listed with ISMG 5050. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3070 - Introduction to Tableau (1 Credit)
Tableau is a widely used business intelligence (BI) and analytics software that makes it easier for people to explore and understand data. This class introduces data management concepts and terminology, provides basic proficiency in analyzing and exploring data in Tableau. Students will transform raw data to meaningful visualizations and insights, create interactive dashboards and stories, and handle multiple data sources in Tableau. Cross-listed with ISMG 5070. Max hours: 1 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3080 - SQL Foundations (1 Credit)
Structured Query Language (SQL or "Sequel") is a special-purpose language designed for managing data in a relational database and is necessary for careers dealing with data across many business roles. This class introduces students to data management concepts and terminology. This class will prepare you to extract data from relational databases using SQL syntax shared by many types of databases, such as PostgreSQL, MySQL, SQL Server, and Oracle. Cross-listed with ISMG 5080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3090 - Introduction to Python for Business (1 Credit)
Python is a high-level programming language used by companies like Google, Facebook, and JP Morgan to solve common business and decision problems. This course introduces the Python programming language and the Pandas data analysis package to enable students to write simple data manipulation and analysis programs. The course uses business applied cases and dataset to enable students to increase decision making efficiency and productivity. It introduces algorithmic thinking skills that are beneficial for every manager in today's data-rich economy and can also serve as a starting point for learning more advanced programming skills. Cross-listed with ISMG 5090. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3110 - Data Government and Ethics (3 Credits)
Most businesses and organizations recognize that data is valuable, yet many don't know what to do with their vast amounts of data. In this course, students will learn to recognize the roles and responsibilities of data stakeholders, understand data's ethical, legal, fiscal, and strategic implications, plan and create ethical data governance programs, and understand how to manage, monitor, and measure the effectiveness of such programs. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3300 - Social Media in Business (3 Credits)
This course focuses on the fundamentals and practical skills of social media marketing. Topics include social interactions, social media metrics, social media ads, content marketing, viral and influencer marketing, the use of social media in marketing research, managing consumers via social media, as well as other trends in social media marketing. Students engage in hands on applications including the creation and management of real brands' social media marketing activities. Cross-listed with MKTG 3300. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ISMG 3500 - Business Data and Database Management (3 Credits)
The success of today's business often hinges on the ability to turn mountains of data into critical information to make right decisions quickly and efficiently. Databases are ubiquitous in today's business environment and are the backbone of today's organizations. This course introduces students to data storage, data retrieval, and data management using current business data management tools. This course emphasizes database design and Structured Query Language (SQL) with hands-on exercises. Prereq: ISMG 2050 with a grade of C- or higher or department approved equivalent transfer credit (may need 1-credit ISMG 3050 and/or ISMG 3070 as supplement). Max hours: 3 Credits.
Grading Basis: Letter Grade
D-BU ISMG 2050 C-+BUSNU+Junior
Typically Offered: Fall.

ISMG 3600 - System Strategy, Architecture and Design (3 Credits)
This course is designed to provide the understanding of current concepts related to information systems development in an organizational context. It emphasizes the interactive nature of the analysis and design process. Topics include: requirements analysis, model based analysis and design; evaluating outsourcing, COTS and other systems acquisition options; and quality, six-sigma, and ethics in design. New concepts such as agile modeling and extreme programming are covered. ISMG 3500, database, is a recommended but not required co-requisite. Prereq: ISMG 2050 with a grade of C- or higher or department approved equivalent transfer credit (may need 1-credit ISMG 3050 and/or 3070 as supplement). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a C- or higher.
Typically Offered: Spring.

ISMG 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4028 - Travel Study Topics (3 Credits)
Join your classmates in an international travel study course to understand the business operations of another culture. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4200 - Building Business Applications (3 Credits)
Examines how software platforms for mobile business applications are designed and implemented. Usability, logic, and platform selection issues are highlighted through the development of simple mobile business systems. Includes programming concepts, interface design; storing, retrieving, and manipulating information; real time decision making; platform selection, testing and deployment. Prereq: ISMG 2800 with a D- or higher. Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2800 Coreq: ISMG 3500 Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall.

ISMG 4300 - Information Systems Security and Privacy (3 Credits)
This course is designed to develop knowledge and skills for security of information and information systems within organizations. This course focuses on concepts and methods associated with planning, designing, implementing, managing, and auditing security at all levels and on all systems platforms, including enterprise systems. This course presents techniques for assessing risk associated with accidental and intentional breaches of security as well as disaster recovery planning. The ethical treatment of data is discussed. Prereq or Coreq: ISMG 3000. As a prerequisite, a grade of C or higher is required. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with ISMG 6430. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ISMG 3000. As a prerequisite, a grade of C or higher is required. Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ISMG 4400 - Programming Fundamentals with Python (3 Credits)
This course is designed to provide a thorough introduction to Python and fundamental programming concepts like data structures, networked application program interfaces, files and databases. Principles of object-oriented programming and secure programming practices are demonstrated using programming constructs taken from the business domain. Students are required to design and create their own applications for data retrieval, processing, and visualization. Prereq: ISMG 2800 with a D- or higher. Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ISMG 4450 - Web Development Immersive (12 Credits)
This course is designed to simulate what you'll experience in a real work environment, and covers the languages, frameworks, and computer science fundamentals essential to a career in web development. It will cover introduction to programming and Front End Development, Server Side Programming with Node, Front End frameworks and Single Page Applications, and Data Structures and Algorithms, as well as a capstone project. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 12 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4700 - IT Infrastructure (3 Credits)
This course provides in-depth knowledge of data communications and networking requirements utilized in an organization. Networking models, devices, optimization, and security of those devices, including troubleshooting, is covered. Management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options is covered. Students learn to evaluate, select, and implement different communication devices within an organization. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ISMG 4750 - Business Intelligence and Financial Modeling (3 Credits)
This course will introduce students to the application of business intelligence in a corporate finance setting. Financial data intelligence is essential for effective decision making throughout the firm, in finance directly and in other functions supported by the finance department. Strategy setting, budgeting, and new product development are just a few decision areas where finance personnel play an active role. In this course, we learn how to apply business intelligence software tools to enable finance personnel to access and analyze corporate data in support of critical decision making across the enterprise. Students will also analyze data through the use of financial models built in Microsoft Excel. The development of complex financial models will provide students with valuable hands-on experience with a software tool used widely incorporate finance departments. Prereq: ISMG 2050 with a grade of 'C-' or higher, FNCE 3000 and ISMG 3000 (ACCT 4054 may substitute for ISMG 3000) all with a grade of 'C' or higher. Cross-listed with FNCE 4750 and ISMG 6820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a grade of 'C-' or higher, FNCE 3000 and ISMG 3000 (ACCT 4054 may substitute for ISMG 3000) all with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ISMG 4760 - Customer Relationship Management (3 Credits)
This marketing-theory driven course examines customer relationship management (CRM) as a key strategic process for organizations. Composed of people, technology and processes, effective CRM optimizes the selection or identification, acquisition, growth and retention of desired customers to maximize profit. Besides presenting an overview of the CRM process, its strategic role in the organization and its place in marketing, students have an opportunity to create simulated CRM database using popular software package that help to illustrate what CRM can do, its advantages and limitations. Prereq: MKTG 3000 and ISMG 3000 both with a grade of C or higher. Cross-listed with MKTG 4760. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 and ISMG 3000 both with a grade of C or higher
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4780 - Accounting and Information Systems Processes and Controls (3 Credits)
The course is designed to develop knowledge and skills used to understand and evaluate corporate accounting processes and systems. It focuses on financial and information system internal controls and the flow of corporate information through accounting system. A financial system objective and risk assessment approach is used to present concepts and techniques for evaluating the adequacy of system processes and controls. Cross-listed with ACCT 4780, 6510 and ISMG 6510. Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ISMG 4785 - Ethics: A Formula for Success (3 Credits)
Students will learn how to spot and address red flags that foster unethical behavior in both publicly-traded and privately-held businesses. Governance and stakeholder management techniques that incentivize ethical behavior will be highlighted using examples of companies that are financially successful by “doing the right thing.” Principle-based ethics are emphasized, namely, integrity, trust, accountability, transparency, fairness, respect, viability, and compliance with the rule of law. Cross-listed with MGMT 3420, MGMT 6420, ISMG 6885. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4860 - Ethical Hacking Concepts and Methodologies (3 Credits)
From a technical perspective, organizations need to know how hackers work so that they can build their security around it and take preemptive measures against future attacks. The goal of ethical hacking is to understand current exploits and assess weaknesses and vulnerabilities of various organizational information systems by attacking them within legal limits. This course is designed to provide students an insight into current hacking tools and techniques used by hackers and security professionals to break into any computer systems. Throughout the course, students will engage in offensive and defensive hands-on exercises stressing ethical hacking and penetration testing that will be conducted in a vendor-neutral virtual environment. Topics include security threats and attack vectors, footprinting and reconnaissance, Google hacking, social engineering, insider threat, network scanning and enumeration techniques, vulnerability assessment, the Dark Web, and attack and defense strategies in emerging technologies, such as the Internet of Things (IoT) and cloud computing. Recommendation: ISMG 4700 or equivalent is advised, but not required, to take course. As a recommendation, ISMG 4700 can be taken concurrently or completed prior. Cross-listed with ISMG 6860. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 4865 - Digital Forensics Analysis (3 Credits)
From cyberterrorism to identity theft, the digital age has brought about a change in how crime is being committed. The usage of computers and the Internet in crime has led to the emerging field of digital forensics. Most businesses employ digital forensic experts to identify cyber threats, protect against insider threats, reinforce data loss prevention, reduce the risk of identity theft, fraud, and other digital crimes, and aid in the collection of digital evidence for various investigations. This course is designed to provide students the necessary skills to perform an effective digital forensics investigation. It presents a methodological approach to digital forensics, including searching and seizing, chain-of-custody, acquisition, preservation, analysis, and reporting of digital evidence. It covers major forensic investigation scenarios that enable students to acquire necessary hands-on experience on various forensic investigation techniques and standard forensic tools required to successfully carry out a digital forensic investigation leading to the prosecution of perpetrators. Cross-listed with ISMG 6865. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 4900 - Project Management and Practice (3 Credits)
Covers the factors necessary for successful management of enhancement projects. Both technical and behavioral aspects of project management are discussed. The focus is on management of development for enterprise-level systems. Topics include: managing the system lifecycle; requirements determination, logical design, physical design, testing, implementation; metrics for project management; managing expectations: superiors, users, team members and others related to the project; determining skill requirement and staffing the project; cost-effectiveness analysis; reporting and presentation techniques; effective management of both behavioral and technical aspects of the project; change management. Oral and/or written communication skills are applied in this course. Oral and/or written communication skills are applied in this course. Note: Successful completion of this course meets the educational requirements to sit for both the PMP and CAPM exams. Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School.

ISMG 4950 - Special Topics (3 Credits)
Seldom offered. This course varies from offering to offering. Typically, it is a research-oriented course exploring new developments in information systems. Prerequisites vary according to topic. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Management (MGMT)

MGMT 1000 - Introduction to Business (3 Credits)
This course will introduce students to the nature and role of business in our society. Problems confronting business are surveyed from a management, financial, economic and marketing viewpoint. Career opportunities in business are also considered. Students are advised to take this course during their freshman year and may not take it in the junior or senior years. Prereq: Open to freshman and sophomores, non-degree students and music majors at all levels. Cross-listed with BMIN 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MGMT 1111 - Business Freshman Seminar (3 Credits)
This course introduces students to the nature and role of business in our society. Career opportunities in business are also considered. This course is designed to assist first year students transition to life on campus. The course content is integrated with various activities designed to familiarize 1st year students with school resources, develop critical thinking and writing skills and build relationships critical to ongoing academic success. Students are advised to take this course during the first semester of their freshman year. Note: Credit will not be given for both MGMT 1111 and MGMT 1000. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

MGMT 2939 - Internship (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

MGMT 3000 - Managing Individuals and Teams (3 Credits)
Focuses on helping students understand how to manage individuals and groups effectively. Students are encouraged to know themselves better and how their behavior affects how they deal with organizational situations; they also learn how individuals differ and how to design, manage and work in a team. Oral and/or written communication skills are applied in this course. This is a business core course therefore a grade of a 'C' or better must be earned to satisfy graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

MGMT 3010 - Managing People for a Competitive Advantage (3 Credits)
Provides an overview of the management of human resources in organizations. Areas of study include recruitment, selection, training, career development, performance appraisal, compensation and employee or labor relations. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3111 - Business Transfer Student Seminar (1 Credit)
This course is designed to assist first year transfer students transition to UC Denver. The course includes various activities designed to familiarize students with University and Business School resources, develop critical thinking, writing, time management and study skills, and build relationships critical to ongoing academic success. Students are advised to take this course during their first or second semester at UC Denver. Concurrent registration in MGMT 3000 is required. Cross-listed with MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 1 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3420 - Ethics: A Formula for Success (3 Credits)
Students will learn how to spot and address red flags that foster unethical behavior in both publicly-traded and privately-held businesses. Governance and stakeholder management techniques that incentivize ethical behavior will be highlighted using examples of companies that are financially successful by "doing the right thing." Principle-based ethics are emphasized, namely, integrity, trust, accountability, transparency, fairness, respect, viability, and compliance with the rule of law. Cross-listed with MGMT 6420, ISMG 4785, and ISMG 6885. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3830 - Business and Sustainability (3 Credits)
Business activity can have significant environmental and societal impacts. This course examines some of the ways that companies and consumers are reducing their impact on communities and the environment. Sustainability issues will be considered from a management, finance, marketing, and consumer perspective. Climate change and renewable energy will be featured topics in the class. Prereq: MKTG 3000. Cross-listed with MGMT 4830, BUSN 6830. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4028 - Travel Study Topics (3 Credits)
Join your classmates in an international travel study course to understand the business operations of another culture. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Additional Information: Global Education Study Abroad.

MGMT 4100 - Leveraging Diversity and Inclusion in Business (3 Credits)
Practical and policy issues that arise from living and working in a multicultural world in order to promote informed, effective management. Particular emphasis is given to the development of innovative approaches to managing the challenges posed by a work force that differs in characteristics, such as race, gender, ethnicity, age, lifestyle and disability. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

MGMT 4120 - Collaborative Experiential Learning (3 Credits)
Explores the place and role of architecture as an instrument of critical social engagement and cultural change. Business students will collaborate with Arch students to explore the role of history and precedent in the design process through client driven projects that demonstrate their proficiency in applying business analysis to project design. Prereq: Senior standing. Restriction: Restricted to undergraduate Business majors. This course will be in collaboration with ARCH 4120. Note: this class will fulfill the Business Schools experiential learning requirement. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing. Restriction: Restricted to undergraduate Business majors.

MGMT 4140 - Negotiation Skills/Property: Effective Strategies (3 Credits)
Course covers real and personal property law, including ownership, title, landlord/tenant, easements, environmental law, and zoning. Emerging issues in intellectual property are also reviewed, including U. S. law and international treaties and agreements. Negotiation techniques through role-playing are emphasized. NOTE: This course is an elective course and my not be used to fulfill the CORE BLAW 3050 course. Meets concurrently with BLAW 4140. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4230 - Sports Management (3 Credits)
This course is designed as a speaker series of sports and entertainment industry elite focusing on: industry trends, strategic planning, managing revenue streams, managing media, managing for effectiveness, managing post-merger integration, leadership and leading change. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring.

MGMT 4231 - Managing Sports Finance (3 Credits)
This course explores the problems and solutions of financing in the sports industry. It focuses on stadium/venue financing, sports team valuation, event guarantee estimation, player salary issues, and managing disparate revenue streams. The course utilizes speakers, articles, problem sets, and cases. Prereq: DSCI/BANA 2010 and ACCT 2200 both with a grade of C- or higher, ECON 2012 and ECON 2022. Coreq: FNCE 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI/BANA 2010 and ACCT 2200 both with a grade of C- or higher, ECON 2012 and ECON 2022 Coreq: FNCE 3000 Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4330 - Mastering Management (3 Credits)
Experiential learning course designed to give students hands-on practice developing critical management skills such as: negotiation, conflict management, group consensus-building, and interpersonal feedback and communication. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4350 - Leading Organizational Change (3 Credits)
Focuses on the tasks and skills of a leader in leading organizational changes. Topics include: diagnosing problems, creating urgency, building the change team, creating a vision, implementing change strategies, sustaining the momentum and making change stick. These tasks and skills are studied in various organizational change contexts. Prereq: MGMT 3000 with a grade of C or higher. Coreq: MGMT 4370. As a corequisite, MGMT 4370 can be taken concurrently or completed prior. If completed prior, must earn a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Prereq or Coreq: MGMT 4370. Can be taken concurrently or completed prior with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4370 - Organization Design (3 Credits)
Examines how to structure organizations to perform effectively. Addresses the effects of computer-based information technologies (e.g. intranets, extranets, and the internet) on firm structure, strategy, and culture. Emphasis is placed on the role of the task, technology, and the environment as constraints on organizational design. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4400 - Environments of International Business (3 Credits)
An overview of the environmental complexities that arise when business activities and firms cross national borders. Key international business environmental complexities associated with country differences, cross-border trade and investment, and global monetary system are examined. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level. Cross-listed with INTB 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level.

MGMT 4410 - Operations of International Business (3 Credits)
Focuses on the impact of environmental factors on international business operations and the identification and analysis of complex strategic and operational issues facing business firms in global markets. The strategies and structures of international businesses, alternative foreign market entry modes, and the unique roles of various business functions at international business firms are explained and assessed. Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with INTB 4410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4420 - HR: Talent MGT (3 Credits)
This course explores the many aspects of Talent Management including strategic talent planning, recruiting and acquisition, employee development, performance management, engagement and retention, succession planning, and compensation, with a strong focus on recruitment and acquisition. The course demonstrates how each aspect of Talent Management is interdependent. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4430 - Human Resources Management: Training (3 Credits)
Covers training methods, theories, research findings. Students design and deliver their own training program, including collecting and analyzing metrics to gauge training success. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 6720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4440 - Human Resource Management: Performance Management (3 Credits)
Focuses on the design and implementation of human resource management systems to assess and enhance employee performance. Areas of study include performance definition and measurement, goal setting, feedback, employee development, rater training, and pay for performance. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4450 - Human Resources Management: Compensation (3 Credits)
Develop and administer pay systems considering economic and social pressures, traditional approaches and strategic choices in managing compensation. Current theory research and practice. Students design a compensation strategy and a system that translates that strategy into reality. Prereq: DSCI 2010 or BANA 2010 with a grade of 'C-' or higher. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 6740. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI 2010 or BANA 2010 with a grade of 'C-' or higher Prereq or Coreq: MGMT 3010. As prereq, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4460 - Employee Benefits and Workforce Risk Management (3 Credits)
The course surveys an array of popular employee benefit programs to attract, protect, and retain valued employees. It also focusses on risk management programs that invest in human capital and address the downside risks of employing a workforce. Cross-listed with MGMT 6760 and RISK 4409/6409. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4481 - Human Resources Management: Career and employment coaching (3 Credits)
Focuses on enhanced approaches to discovering employment opportunities and providing career coaching, with an emphasis on unemployed veterans. Topics include discovering the unique capabilities a job-seeking veteran possesses, addressing the barriers to employment he or she may face, and methods the job seeker can use to educate prospective employers about the contributions to organizational success he or she can make. Cross-listed with MGMT 6781. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4482 - Human Resources Management: Connecting talent with business needs (3 Credits)
Focuses on methods for connecting businesses and public-sector organizations with job seekers who possess the capabilities that will fuel profitable growth and mission success. Topics include networking to establish relationships with hiring decisions makers, exploration conversations to identify an organization's success factors, and identifying job seekers (with a special emphasis on unemployed veterans) with the requisite skills, knowledge, traits, and aptitudes. Cross-listed with MGMT 6782. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4500 - Business Policy and Strategic Management (3 Credits)
Emphasis is on integrating the economic, market, social or political, technological, and components of the external environment with the internal characteristics of the firm; and deriving through analysis the appropriate interaction between the firm and its environment to facilitate accomplishment of the firm's objectives. Oral and/or written communication skills are applied in this course. Open only to business students in their graduation semester. This is a business core course therefore a grade of 'C' or better must be earned to satisfy Business graduation requirements. Prereq: Senior standing and completion of all business core courses with appropriate grade; Core = ISMG 2050, DSCI/BANA 2010, ACCT 2200, ACCT 2220, BLAW 3050 (or BLAW 3000) all with a 'C-' or higher; ISMG 3000, DSCI/BANA 3000, FNCE 3000, MGMT 3000, and MKTG 3000 all with a grade of 'C' or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or higher: ISMG 2050, BANA 2010, ACCT 2200, ACCT 2220, BLAW 3050 (or BLAW 3000). C or higher: ISMG 3000, BANA 3000, FNCE 3000, MGMT 3000, MKTG 3000, and senior standing. Restriction: Restricted to undergraduate majors in the Business School
Typically Offered: Fall, Spring, Summer.

MGMT 4770 - Human Resource Information Systems (3 Credits)
Focuses on the management of human resource information systems. It addresses how modern information systems tolls can provide better human resource intelligence to users in today's enterprises, allowing them to make better decisions. It examines how information about workforce and human resource management processes can be collected and used to set targets to meet strategic objectives, monitor performance, receive notifications when performance is below expectations and respond immediately by taking corrective actions. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4780 - Preparing A Business Plan (3 Credits)
Turn a new business idea into a viable new business by developing a comprehensive business plan including: analysis of the potential demand for the product or service and potential customers; identify competitive advantages and marketing strategies; generate pro forma financial projections; and,design the management team needed. Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher. For non-business majors only. Can be applied to Entrepreneurship Certificate. Business majors enroll in either MGMT 4780 or MKTG 4780. Come to first class meeting with a carefully considered business idea. Cross-listed with MKTG 4780 and ENTP 3780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher.

MGMT 4824 - Sustainable Business/CSR Field Study (3 Credits)
Gain practical, hands-on experience with aspects of sustainable business and/or corporate social responsibility. Work with a local company/non-profit/or government organization under the direction of an executive to conduct a sustainability-focused project which is important to the organization's sustainability initiative. Students may petition to use previous coursework or experience in sustainability to fulfill the prerequisite. Please contact the undergrad.advising@ucdenver.edu for more details. Prereq: MGMT 3830 or MGMT 4110 with a C or higher or department consent. Restriction: Restricted to undergraduate majors within the Business School. Cross-listed with MGMT 6824. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3830 or MGMT 4110 with a C or higher or department consent. Restrictions: Restricted to undergraduate majors within the Business School.

MGMT 4825 - Sustainable Change Leadership: Turning Business Into a Force for Good (3 Credits)
This course develops leadership from the perspective of managing the people side of change required to transform a traditional business to one that is not only financially successful but also a genuine "force for good" for our natural and social environment. The BLab Impact Assessment tool is used to measure, monitor, and link sustainable business practices to drive continuous improvement and innovation. Students will conduct hands-on, practical work with local businesses to develop change leadership skills as they relate to sustainability. NOTE: this course will satisfy the BGen requirement (experiential learning requirement). Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 6825. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4830 - Business and Sustainability (3 Credits)
Business activity can have significant environmental and societal impacts. This course examines some of the ways that companies and consumers are reducing their impact on communities and the environment. Sustainability issues will be considered from a management, finance, marketing, and consumer perspective. Climate change and renewable energy will be featured topics in the class. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 3830, BUSN 6830. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4832 - Law & Negotation in the Sports and Entertainment Industry (3 Credits)
This course provides an overview of major legal issues in the sports and entertainment industries. Students develop the skills required to negotiate contracts in these industries. Topics include contracts, copyright, trademark, employment and tort law principles relevant in the sports and entertainment fields. Prereq: MGMT 3000 with a grade of C (2.0) or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

MGMT 4834 - London Calling: Global Sports & Entertainment Management (3 Credits)
Through 2 weeks of visiting organizations with industry elite in London a broader perspective on the sports and entertainment industry is gained. Students will be asked to do advance reading, participate in discussions, keep a journal and write a reflection paper at the end of the experience. Site visits (to be confirmed) include: Arsenal Football Club, Premier League, the O2 Arena, NHL and NBA regular season games in London, 2012 Olympics Committee, Formula One, Hollywood Studio-International Finance Office, Theatre, Lord's Cricket Ground, All England Lawn Tennis Club/Wimbledon and the Office of the Minister of Sport. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 6834, MKTG 4834, and MKTG 6834. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

MGMT 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4900 - Project Management and Practice (3 Credits)
Covers the factors necessary for successful management of system development or enhancement projects. Both technical and behavioral aspects of project management are discussed. The focus is on management of development for enterprise-level systems. Topics include: managing the system life cycle; requirements determination, logical design, physical design, testing, implementation; system and database integration issues; network and client-server management; metrics for project management and system performance evaluation; managing expectations: superiors, users, team members and others related to the project; determining skill requirements and staffing the project; cost-effectiveness analysis; reporting and presentation techniques; effective management of both behavioral and technical aspects of the project; change management. Oral and/or written communication skills are applied in this course. Note: Successful completion of this course meets the educational requirements to sit for both the PMP and CAPM exams. Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School. Cross-listed with ISMG 4900. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School.

MGMT 4950 - Special Topics in Management (3 Credits)
A number of different topics in management are offered under this course number. Consult the 'Schedule Planner' for current course offerings. Prerequisites vary depending on the topic and instructor requirements. Cross-listed with MGMT 5800. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Marketing (MKTG)

MKTG 1000 - Introduction to Marketing (3 Credits)
Provides an introduction and overview of marketing. Discusses market and buyer analysis. Includes product planning, pricing, promotion and distribution of goods and services. For non-business majors only. Does not satisfy the MKTG 3000 business requirement. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors outside the Business School.

MKTG 1001 - Introduction to Esports Business I (1 Credit)
Students will learn about the exciting world of Esports Business including Esports Marketing, Esports Sponsorships, and Esports fans and consumer behavior?. Other topics will include the following. What are the various types of Esports? What are the career opportunities in esports? Where are the jobs in esports? How do you prepare for a career in Esports? What skills do you need to succeed in the Esports Business. How do Esports Businesses generate revenue? How is Esports connected to traditional sports? How does Esports fit within the entertainment industry. What distribution models are used? Max hours: 1 Credit.
Grading Basis: Letter Grade

MKTG 2939 - Internship (1 Credit)
Introductory supervised experiences involving the applications, concepts and skills in an employment situation. Prereq: sophomore standing Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory
Restrictions: Restricted to sophomore standing or higher.

MKTG 3000 - Principles of Marketing (3 Credits)
Focuses on the basic marketing concepts of Buyer Behavior, Marketing Research, Marketing Planning and Implementation and the marketing process of product, price, distribution and promotion. This is a business core course therefore a grade of a 'C' or better must be earned to satisfy graduation requirements. Coreq: COMM 1001 or 2050. Note: Coreq of COMM 2050 needs to be completed with a C- or higher to satisfy the requirement. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: COMM 1001 or 2050. Restriction: Restricted to undergraduate students at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

MKTG 3100 - Marketing Research (3 Credits)
Provides practical experience in research methodologies, planning an investigation, designing a questionnaire, selecting a sample, interpreting results and making a report. Techniques focus on attitude surveys, behavioral experiments, and qualitative research. Prereq: DSCI/BANA 2010 with a 'C-' or higher and MKTG 3000 with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI/BANA 2010 with a 'C-' or higher and MKTG 3000 with a grade of 'C' or higher Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 3200 - Consumer Behavior (3 Credits)
Focuses on improving the student's understanding of consumer and organizational buying behavior as a basis for better formulation and implementation of marketing strategy. Blends concepts from the behavioral sciences with empirical evidence and introduces buyer research techniques. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 3300 - Social Media in Business (3 Credits)
This course focuses on the fundamentals and practical skills of social media marketing. Topics include social interactions, social media metrics, social media ads, content marketing, viral and influencer marketing, the use of social media in marketing research, managing consumers via social media, as well as other trends in social media marketing. Students engage in hands on applications including the creation and management of real brands' social media marketing activities. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ISMG 3300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

MKTG 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4000 - Advertising (3 Credits)
Analyzes principles and practices in advertising from a managerial viewpoint. Considers the reasons to advertise, product and market analysis as the planning phase of the advertising program, media selection, creation and production of advertisements, copy testing, and development of advertising budgets. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4050 - Applied Marketing Management (3 Credits)
The course is designed to enhance the student's ability to formulate and implement a marketing plan and to better understand the relationship of marketing to other business functions. Emphasized application of marketing concepts through the use of cases, simulations or projects. Prereq: MKTG 3000 with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4051 - Honors Applied Marketing Management (3 Credits)
MKTG 4051 is the honors version of 4050. It is designed to enhance the student's ability to formulate and implement a marketing plan and to better understand the relationship of marketing to other business functions. It will emphasize application of marketing concepts through the use of cases and projects. In the first half of the semester student teams will participate in the Media+Tech Innovation Challenge sponsored by the Media+Tech Collective (formerly Rocky Mountain Cable Association). The case will focus on a topic related to television/media content, its distribution and related technologies. This is the 15th year of the collegiate case competition (which will be virtual in 2021) which matches students with industry mentors and offers students networking opportunities and cash prizes. CU Denver students in the course will compete against students from DU and UCCS. The second half of the semester will include further application of marketing concepts through continuation of the case study competition topics and other cases and projects. Prereq: MKTG 3000 with a grade of 'C' or higher and a 3.0 GPA overall or within the B School. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Ideally students will have taken at least 9 hours in MKTG. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of 'C' or higher and a 3.0 cumulative GPA. Restriction: Restricted to undergraduate Business majors at a junior standing or higher

MKTG 4200 - International Marketing (3 Credits)
Studies managerial marketing policies and practices of firms marketing their products in foreign countries. Analytical survey of institutions, functions, policies, and practices in international marketing. Relates marketing activities to market structure and environment. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with INTB 4200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a C- or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

MKTG 4220 - Asian Business Development and Marketing (3 Credits)
This course investigates methods of Business Development and Marketing in the Asian Business Environment. It seeks to examine and explain methods of determining market potential and techniques tapping this market potential in this dynamic and rapidly growing business environment the course uses a combination of experienced guest speakers, Asian business cases and projects to develop the marketing skills in students to successfully compete in Asia. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4250 - Sports Marketing (3 Credits)
This course is designed to understand and evaluate the role and functions of marketing in sports organizations. The course seeks to evaluate the marketing function in sports as well as understand the behavior of fans as consumers, celebrity product endorsements, sponsorship of sporting events for all sport providers, sports intermediaries and channels and advertising and promotion in the sports world. The course is taught using lectures, guest speakers, cases and examinations. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4251 - Music and Media Marketing (3 Credits)
This course explores strategies, tactics and best practices utilized in the marketing of music, performing and dramatic arts. From recording artists and movie studios to repertory theater companies and symphony orchestras, artists and organizations need sound marketing strategies to engage audiences, sell tickets, and market merchandise to maintain profitable and sustainable operations. Restriction: Restricted to undergraduate Business Students with Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4252 - The Business of Sports (3 Credits)
This course focuses on strategic business issues in the sports industry. It covers business issues for both spectator sports and individual participant Sports. Spectator sports include football, basketball, hockey, baseball, extreme competitive sports, Olympic sports etc.). Participant sports include outdoor adventure Sports (e.g., Hiking, whitewater rafting, Biking), skiing, golf, tennis, and youth sports. Topics include industry trends, strategic planning, management challenges, financing in sports, and major legal issues in sports. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4580 - International Transportation (3 Credits)
Analysis of international transportation (primarily sea and air) in world economy. Detailed study of cargo documentation and freight rate patterns. Included are liability patterns, logistics, economics, and national policies of transportation. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

MKTG 4620 - Customer Service Strategies (3 Credits)
This course is designed to help students identify and effectively use managerial concepts of customer service. Students will develop an understanding of the concepts as well as knowledge of the strategies that will lead to higher levels of customer satisfaction, loyalty and ultimately customer retention. Students will have the opportunity to gain firsthand knowledge of these concepts and strategies through lectures, guest speakers, cases and projects. Prereq: MKTG 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4700 - Personal Selling and Sales Management (3 Credits)
Introduces the student to principles of personal selling and issues in managing the field sales force. Focuses on models of personal selling, recruiting, selection, training, compensation, supervision, and motivation, as well as organizing the field sales force, sales analysis, forecasting and budgeting. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4720 - Internet Marketing (3 Credits)
Distinctly influences the way marketers conduct marketing activities. The Internet media promises to establish marketing theories, identifies obsolete situations, explores how marketing functions have irreversibly changed as a result of the internet, and outlines basic marketing strategies for successful online marketing. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ENTP 4720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4730 - New Product Development for Consumer and Sports Products (3 Credits)
The creation of new products is essential in today's business environment. It is conducive to organizational growth and long-term survival. This course addresses the new product development process in depth. It introduces students to key concepts and issues. It also provides a series of practices which will help students deliver higher value and be more competitive. Prereq: MKTG 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ENTP 4730. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4760 - Customer Relationship Management (3 Credits)
This marketing-theory driven course examines customer relationship management (CRM) as a key strategic process for organizations. Composed of people, technology and processes, effective CRM optimizes the selection or identification, acquisition, growth and retention of desired customers to maximize profit. Besides presenting an overview of the CRM process, its strategic role in the organization and its place in marketing, students have an opportunity to create simulated CRM database using popular software package that help to illustrate what CRM can do, its advantages and limitations. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with ISMG 4760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4780 - Preparing Business Plan (3 Credits)
Turn a new business idea into a viable new business by developing a comprehensive business plan including: analysis of the potential demand for the product or service and potential customers;identify competitive advantages and marketing strategies;generate pro forma financial projections; and,design the management team needed. Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher. For non-business majors only. Can be applied to Entrepreneurship Certificate. Business majors enroll in either MGMT 4780 or MKTG 4780. Come to first class meeting with a carefully considered business idea. Cross-listed with MGMT 4780 and ENTP 3780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher.

MKTG 4784 - Sales Negotiation (3 Credits)
This course focuses on developing advanced professional sales and negotiation skills utilized in successful organizations. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4800 - Marketing Seminar (3 Credits)
Offered to provide consideration of a wide variety of topical issues in marketing, such as, services marketing, pricing, product development or creative marketing strategies. Prereq: MKTG 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4834 - London Calling: Global Sports & Entertainment Management (3 Credits)
Through 2 weeks of visiting organizations and talking with industry elite in London a broader perspective on the Sports and Entertainment Industry is gained. Students will be asked to do advanced reading, participate in discussions, keep a journal and write a reflection paper at the end of the experience. Site visits (to be confirmed) include: Arsenal Football Club, Premier League, the O2 Arena, NHL and NBA regular season games in London, 2012 Olympics Committee, Formula One, Hollywood Studio-International Finance Office, Theatre, Lord's Cricket Ground, All England Lawn Tennis Club/Wimbledon and the office of the Minister of Sport. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 4834, MGMT 6834, and MKTG 6834. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

MKTG 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4950 - Special Topics (3 Credits)
Courses offered on an irregular basis for the purpose of presenting new subject matter in marketing. Prerequisites vary depending upon the particular topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Risk Management (RISK)

RISK 1000 - Introduction to Risk Management and Insurance Careers (1 Credit)
This course introduces students to the many and varied career opportunities in the risk management and insurance industry via visiting industry professionals and on-site industry visits. The course meets 1 hour each week. No co-credit with RISK 1001. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

RISK 1001 - Careers in Risk Management (1 Credit)
This course introduces high school students to the many and varied opportunities in the risk management and insurance industry via visiting professionals and on-site industry visits. This course meets during the summer semester. It is pass/fail. This course is equivalent to RISK 1000 Introduction to Risk Management and Insurance Careers in content. Note: Must be a high school student or recent high school graduate to enroll. CU Denver students cannot enroll. No co-credit with RISK 1000. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

RISK 3809 - Introduction to Risk Management (3 Credits)
This course introduces students to the fundamentals of risk and risk management for businesses and individuals. Corporate risk management techniques covered range from insurance to enterprise risk management. Personal risks discussed range from unemployment to retirement. Prereq: FNCE 3000. Insurance carrier operations are also considered. Restriction: junior/senior standing required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

RISK 3949 - Experiential Learning in RMI Industry (3 Credits)
This course connects students to risk management service providers through the Risk Management and Insurance (RMI) Program. The students will intern with a specific provider. The RMI program and faculty will supervise and monitor tasks and assignments, and coordinate with the providers to maximize the learning experience. Restriction: junior/senior standing required. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to Juniors and Seniors only.

RISK 4129 - Practical Enterprise Risk Management (3 Credits)
Enterprise RM involves identifying the risks and opportunities faced by a firm, assessing them, developing and implementing a plan to address them, and then monitoring progress. Students will learn the basics of ERM while working with risk management professionals to develop and present such a plan to an ongoing business. Cross-listed with RISK 6129. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: FNCE 3500
Typically Offered: Fall, Spring.

RISK 4209 - Cyber Risk Management (3 Credits)
Computer networks and the data that travels upon them are under constant and increasing attack. This course will focus on a discussion of how state and non-state actors utilize this form of asymmetrical warfare to infiltrate government and corporate networks, risk management responds and risk strategies apply. Cross-listed with RISK 6209. Restriction: junior/senior standing or instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Junior standing or higher.

RISK 4309 - Strategic Risk Management (3 Credits)
Strategic risk management (SRM) seeks to manage the risks inherent in a company's strategy, the risks to its plans to add value to its owners and society by raising its return on equity, allowing the company to compete successfully across a wider array of business environments, acting when its competitors cannot, and reducing its 'risk of ruin.' Because the future is unknown, SRM is charged with identifying and managing unknown uncertainties. The challenge of doing this makes for a fascinating course. Cross-listed with RISK 6309. Prereq: RISK 3809 and RISK 4809. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 and RISK 4809.

RISK 4409 - Employee Benefits and Workforce Risk Management (3 Credits)
The course surveys an array of popular employee benefit programs to attract, protect, and retain valued employees. It also focusses on risk management programs that invest in human capital and address the downside risks of employing a workforce. Restriction: Junior or Senior standing. Cross-listed with RISK 6409 and MGMT 4460/6760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Junior or Senior standing

RISK 4509 - Global Risk Management (3 Credits)
This course is designed to study how risk is transferred globally. The course will include travel to London, which is the home to many of the world's largest insurers and reinsurers. While in London, we will visit and have presentations from insurance brokers, companies, Lloyds of London, and reinsurers. Prereq: One RISK course. Restriction: Junior or Senior standing. Cross-listed with RISK 6509. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: One RISK course Restriction: Restricted to students with junior/senior standing.

RISK 4609 - Claims Management (3 Credits)
This course will provide an overview of the claims process in the Property and Casualty Insurance world. Students will learn about basic claims handling for personal and commercial claims as well as how to determine coverage and legal issues. Prereq: RISK 3809 with a grade of at least C (GPA 2.0). Restriction: Junior/Senior standing required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 with a grade of at least C (GPA 2.0) Restriction: Junior/Senior standing required

RISK 4709 - Life and Health Insurance (3 Credits)
This course introduces students to life and health insurance concepts and policy types with an emphasis on insurance planning for individuals and businesses. The insurance industry and trends within it are also explored. Prereq: RISK 3809 and FNCE 3000 with a grade of at least C (GPA 2.0). Restriction: Junior/Senior standing required. Cross-listed with RISK 6709. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 and FNCE 3000 with a grade of at least C (GPA 2.0)
Restriction: Junior/Senior standing required

RISK 4809 - Property & Casualty Insurance (3 Credits)
Students learn the fundamentals and uses of personal and commercial property and casualty insurance, including cost and pricing issues. Insurance company financial management and current trends in the insurance industry are also explored. Restriction: Junior/Senior Standing, or permission of the instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Junior/Senior Standing

RISK 4909 - Corporate Risk Management (3 Credits)
This course provides an overview of the corporate risk management process. It considers the ways companies identify their risk exposures, the tools used to measure and mitigate those exposures including the latest developments in alternative risk transfer, and ultimately, how risk management adds value to the firm. Prereq: RISK 3809 with a grade of C or higher. Coreq: FNCE 3500. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with FNCE 4909/6909 and RISK 6909. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: RISK 3809 with a grade of C or higher. Corequisite: FNCE 3500. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

Accounting, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

Accounting courses are offered in several fields of professional accountancy at the intermediate, advanced and graduate levels. They provide preparation for practice in one or more of the following fields:

- Public Accounting: Auditing, consulting, and tax compliance and planning
- Accounting in Industry: All industries, including energy, financial, manufacturing, retail
- Accounting in Government and Nonprofits
- Academics: Teaching and research in accounting areas of financial reporting, managerial accounting, auditing, accounting information systems, and taxation

In all of these fields a thorough knowledge of the social, legal, economic, and political environment is needed. A high degree of analytical ability and communication skill is indispensable.

Courses in English composition, speech, ethics, and logic are desirable. Courses in data analysis and information systems (beyond the required business core courses), are recommended.

Program Delivery

- This major is available both on-campus and fully online.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
ACCT 3220	Intermediate Financial Accounting I [1]	3
ACCT 3230	Intermediate Financial Accounting II	3
ACCT 3320	Cost Analytics	3
ACCT 4054	Accounting Information Systems [1,2]	3
ACCT 4410	Fundamentals of Federal Income Tax	3
ACCT 4620	Auditing Theory	3
Select one of the following:		3
ACCT 4240	Advanced Financial Accounting	
ACCT 4370	International Accounting	
ACCT 4420	Taxation of Business Entities	
ACCT 4520	Oil and Gas Accounting	
ACCT 4800	Accounting for Government and Nonprofit Organizations	
Or any other 4000-level ACCT course		
Total Hours		**21**

[1] A grade of C or higher must be earned in all courses that are used as prerequisites.
[2] Replaces ISMG 3000 Technology In Business in Business Core.

Notes

- Students should note that all finance, risk, and accounting courses are not offered every semester. Students should plan to take the ACCT 2200 Financial Accounting and Financial Statement Analysis and ACCT 2220 Managerial Accounting and Professional Issues courses as soon as possible to avoid future problems in their schedules, since these are prerequisites for all courses in the specialization.
- Students also have the opportunity to continue their education with an MS in Accounting. The Accounting 4+1 program allows students to potentially complete both the BS and MS degrees in as little as five years through substituting two graduate courses for two undergraduate courses. The graduate courses count towards both the BS and MS degrees.
- If you are considering this 4+1 program, contact your advisor immediately so that you can appropriately plan your coursework. Email: undergrad.advising@ucdenver.edu
- If you are considering pursuing a CPA, talk to the accounting department about the best courses to take. Email: accounting.cpa@ucdenver.edu

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Entrepreneurship, BS in Business Administration

Introduction

The Jake Jabs Center's entrepreneurship curriculum incorporates instruction, mentoring, and support from outstanding Business School faculty, as well as from outside professionals with expertise in new business development. This major explores legal issues, social sector initiatives, new venture design, finance structuring, strategic web development, leadership, new product development and business plan creation. Students learn from case studies, classroom instruction, and guest lectures featuring successful entrepreneurs and renowned business leaders.

Program Delivery

- This certificate can be completed in-person, fully online, or a combination of both.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
ENTP 3200	Essentials in Entrepreneurship	3
ENTP 3230	Small Business Accounting and Finance	3
ENTP 3299	Business Model Development & Planning	3
Three 3000-4000 level ENTP electives		9
Total Hours		**18**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Finance, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

The principal areas of study in finance are financial management in small and large businesses, investments, financial institutions, and international finance. The study of finance is intended to provide an understanding of fundamental theory and practice pertaining to finance; to make sound financial decisions. Students are taught to think logically about financial problems, so that they can formulate and implement value maximizing decisions and policies for the business. For this purpose, it is necessary to understand the importance of finance in the economy and the functions and purposes of monetary systems, credit, prices, money markets, and financial institutions. Emphasis is placed on financial policy, management, control, analysis, and decision making.

The finance major provides students with the skills to succeed in all areas of finance. Numerous job opportunities exist in the field of business finance and with financial institutions, mutual funds, securities firms, personal wealth management firms, and financial planning firms including positions involving an understanding and sale of securities.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
International Studies		
FNCE 4370	International Financial Management	3
Required Courses		
FNCE 3500	Management of Business Capital [1]	3
FNCE 3600	Financial Markets and Institutions	3
FNCE 3700	Investment and Portfolio Management [1]	3
FNCE 4500	Corporate Financial Decisions [1]	3
Select three upper division FNCE electives [2]		9
Select one FNCE, CMDT or RISK elective		3
Total Hours		**27**

[1] A grade of C or higher must be earned in all courses that are used as prerequisites.

[2] Each upper division FNCE elective must be 3 credits.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Financial Management, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

The financial management major provides students with the skills needed to succeed in financial management careers. The business community has affirmed that students need skills in both the accounting and finance areas. The financial management specialty incorporates knowledge of corporate financial management, financial institutions and markets, investments, financial accounting and managerial accounting, accounting information systems, and information technology. Career opportunities include corporate financial management, finance/accounting positions with financial institutions, and accounting positions that are not CPA-track. The major provides a solid finance and accounting background for other business positions as well.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
International Studies		
FNCE 4370	International Financial Management	3
Required Courses		
ACCT 3220	Intermediate Financial Accounting I [1]	3
ACCT 3230	Intermediate Financial Accounting II	3
ACCT 4054	Accounting Information Systems [1,2]	3
ACCT 4410	Fundamentals of Federal Income Tax	3
FNCE 3500	Management of Business Capital [1]	3
FNCE 3600	Financial Markets and Institutions	3
FNCE 3700	Investment and Portfolio Management [1]	3
FNCE 4500	Corporate Financial Decisions [1]	3
RISK 3809	Introduction to Risk Management	3
Total Hours		**30**

[1] Must be completed with a C or higher.
[2] Replaces ISMG 3000 Technology In Business in Business Core.

Note

Please note that all finance, risk, and accounting courses are not offered every semester. Students should take the ACCT 2200 Financial Accounting and Financial Statement Analysis and ACCT 2220 Managerial Accounting and Professional Issues courses as soon as possible to avoid future problems in their schedules, since these are prerequisites for all courses in the specialization.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Human Resources Management, BS in Business Administration

Introduction

Please click here (p. 134) to see Business School information.

Human Resources Management offers opportunities for students to develop professional competence in the areas of personnel administration and development. Students acquire an understanding of, and skills in, developing and implementing human resources systems including recruitment, selection, evaluation, training, motivation, and compensation.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
MGMT 3010	Managing People for a Competitive Advantage	3
Select two of the following:		6
MGMT 4420	HR: Talent MGT	
MGMT 4430	Human Resources Management: Training	
MGMT 4440	Human Resource Management: Performance Management	
MGMT 4450	Human Resources Management: Compensation	
Select three of the following:		9
ENTP 3200	Essentials in Entrepreneurship	
or ENTP 4200	Mission Driven Entrepreneurial Mindset	
MKTG 4050	Applied Marketing Management	
Upper division MGMT elective		
Upper division MGMT elective		
Upper division MGMT elective		
Total Hours		**18**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Information Systems, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

The information systems program at the University of Colorado Denver is a nationally accredited program for students who want to design and implement effective solutions to meet organizational and management needs for information, control and decision making.

An information systems (ISMG) major draws on a diverse set of skills and strengths requiring creative and innovative thinking at the intersections of disciplinary knowledge and practice. Information systems students learn how information technology, effective teamwork and leadership and sound project management combine to enable innovation and change, to improve organizational agility and to add competitive value. Courses require extensive hands-on projects, teamwork, and use of high-end technology. A combination of technical skills gained in class work with broad-based business process knowledge enables our graduates to be ideally situated to take leading roles in shaping the technology-based future of employers in the Rocky Mountain region and the nation.

Specializations available in Accounting, Finance, Human Resource Management, Management and Marketing

Undergraduate Options

The Business School at the University of Colorado Denver offers a bachelor of science in business administration where you may choose information systems as your primary core specialty:

- Information Systems, Bachelor of Science in Business Administration degree

Career Opportunities

Careers in information systems continue to be one of the highest growth markets in the business world. A student completing the information systems program curriculum will be prepared for challenging careers as a business analyst, database administrator, Web content manager, information security analyst, IT consultant, and data scientist. Employment possibilities include financial operations, health care, management consulting, service operations, transportation, and logistics and government.

Information systems are the foundation of all business activities, and a solid understanding of the role of information systems in business and in the national and global economy is now critical for every business student. The information systems major focuses on the effective use of information technology in business. You are equipped with logical and analytical thinking in all areas of business and a strong basis for continued career growth in a variety of growing professions. You will develop the technical skills, business know-how and administrative insights required for acquisition, deployment and management of IT resources and services development, operation and evolution of IS infrastructure for use in accounting, finance, marketing, management and other business processes.

Program Delivery

- This is an on-campus or online program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

The courses emphasize both team and individual work, allowing students to gain critical thinking skills, knowledge and experience to analyze, design, program, implement and use information.

Code	Title	Hours
ISMG 3500	Business Data and Database Management	3
ISMG 3600	System Strategy, Architecture and Design	3
ISMG 4300	Information Systems Security and Privacy	3
ISMG 4400	Programming Fundamentals with Python	3
ISMG 4700	IT Infrastructure	3
ISMG 4900	Project Management and Practice [1]	3
Select two upper division ISMG electives or, if following a specialization, select 2 courses from one of the specializations:		6
Accounting Specialization (p. 168)		
Finance Specialization (p. 168)		
Human Resource Management Specialization (p. 169)		
Management Specialization (p. 169)		
Marketing Specialization (p. 169)		
Total Hours		**24**

[1] Also fulfills BGEN Experiential Learning requirement

Accounting Specialization

Code	Title	Hours
Select two of the following:		6
ACCT 3220	Intermediate Financial Accounting I	
ACCT 3230	Intermediate Financial Accounting II	
ACCT 4054	Accounting Information Systems	

Finance Specialization

Code	Title	Hours
Select two of the following:		6
FNCE 3500	Management of Business Capital	
FNCE 3600	Financial Markets and Institutions	
FNCE 3700	Investment and Portfolio Management	
FNCE 4750	Business Intelligence and Financial Modeling [1]	

[1] FNCE 4480 Introduction to Financial Modeling may be taken as a substitute for FNCE 4750.

Human Resource Management Specialization

Code	Title	Hours
Select two of the following:		6
MGMT 3010	Managing People for a Competitive Advantage	
MGMT 4420	HR: Talent MGT	
MGMT 4430	Human Resources Management: Training	
MGMT 4440	Human Resource Management: Performance Management	
MGMT 4450	Human Resources Management: Compensation	

Management Specialization

Code	Title	Hours
Select two of the following:		6
MGMT 4350	Leading Organizational Change	
MGMT 4370	Organization Design	
MGMT 4400	Environments of International Business	

Marketing Specialization

Code	Title	Hours
Select two of the following:		6
MKTG 3100	Marketing Research	
MKTG 3200	Consumer Behavior	
MKTG 4050	Applied Marketing Management	
MKTG 4760	Customer Relationship Management	

Notes

Not all Information Systems courses are offered every semester - so please make sure to contact advising to plan ahead.

Students also have the opportunity to continue their education with an MS in Information Systems. The ISMG 4+1 program allows students to potentially complete the BS and MS degrees in as little as five years through substituting two graduate courses for two undergraduate courses. The graduate courses count towards both the BS and MS degrees.

If you are considering this 4+1 program, make sure to contact your advisor immediately so that you can appropriately plan your coursework. You can do this by emailing undergrad.advising@ucdenver.edu.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

International Business, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

The International Business major integrates a global dimension in the business curriculum. Students develop a global mindset, broaden their knowledge of the environment of international business, and learn fundamental skills in international business operations.

The University of Colorado Denver is the only Colorado university, and one of just 15 universities nationwide, granted the U.S. Department of Education's prestigious designation as a Center for International Business Education Research (https://www1.ucdenver.edu/institutes/international-business/) (CIBER), an honor earned in large part through the excellence of the international business program.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
Foundation		
MGMT 4370	Organization Design	3
MKTG 4050	Applied Marketing Management	3
FNCE/INTB 4370	International Financial Management	3
INTB 4400	Environments of International Business	3
INTB 4410	Operations of International Business	3
INTB 4200	International Marketing	3
Total Hours		**18**

Notes

International Business Majors must take one upper division business elective to replace the International Studies requirement.

A second major in Business is highly recommended. In addition, serious consideration should be given to advanced study of a foreign language and participation in international field study opportunities.

Students are encouraged to participate in multiple activities in International Business offered by the Business School in collaboration with the Institute for International Business and CIBER, such as the International Business Student Network (student club), International Executive Roundtable Lecture Series, and CIBERVets (international program for veterans and military students).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Management, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

Management is an extremely versatile emphasis that prepares students to pursue career opportunities across a variety of industries and types of businesses including corporate, public sector, and non-profit organizations. Through the completion of this Business Administration degree, students acquire the necessary knowledge and skills to build careers in leadership positions. Examples of typical management career paths are consulting, personnel recruiting and coaching, human resources, sales/client development, and any position that involves managing and leading people to achieve organizational goals.

Program Delivery

- This major is available both on-campus and fully online.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
MGMT 3010	Managing People for a Competitive Advantage	3
MGMT 4330	Mastering Management	3
MGMT 4350	Leading Organizational Change	3
MGMT 4370	Organization Design	3
MKTG 4050	Applied Marketing Management	3
Select two of the following:		6
ENTP 3200	Essentials in Entrepreneurship	3
or ENTP 4200	Mission Driven Entrepreneurial Mindset	
Upper division MGMT elective		
Upper division MGMT elective		
Total Hours		**24**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Marketing, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

Marketing is concerned with directing the activities of the organization toward the satisfaction of customer wants and needs. This involves understanding customers, identifying those wants and needs that the organization can best serve, guiding the development of specific products or services, planning and implementing ways to take products or services to the market, securing the customer's order and finally, monitoring customer response in order to guide future activities.

In most organizations, marketing is a major functional area that provides a wide variety of career opportunities in such fields as personal selling and sales management, advertising and sales promotion, public relations, marketing research, physical distribution, product management, market management, marketing information systems and retail management. Increasingly, career opportunities exist in service businesses and nonprofit organizations.

Program Delivery

- This major is available both on-campus and fully online.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
MKTG 3100	Marketing Research	3
MKTG 4050	Applied Marketing Management	3
Select six upper-division MKTG prefixed courses, such as: [1]		18
MKTG 3200	Consumer Behavior	
MKTG 3300	Social Media in Business	
MKTG 4000	Advertising	
MKTG 4200	International Marketing	
MKTG 4250	Sports Marketing	
MKTG 4251	Music and Media Marketing	
MKTG 4620	Customer Service Strategies	
MKTG 4700	Personal Selling and Sales Management	
MKTG 4720	Internet Marketing	
MKTG 4730	New Product Development for Consumer and Sports Products	
MKTG 4760	Customer Relationship Management	
MKTG 4780	Preparing Business Plan	
MKTG 4950	Special Topics	
Total Hours		**24**

[1] Additional MKTG electives may be available. Please check the UCD Access course offerings each term.

For career paths in Marketing Strategy/Brand Management and Communications, the following courses are recommended:

Code	Title	Hours
MKTG 3200	Consumer Behavior	3
MKTG 3300	Social Media in Business	3
MKTG 4000	Advertising	3
MKTG 4620	Customer Service Strategies	3

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Risk Management and Insurance, BS in Business Administration

Introduction

Please click here (https://business.ucdenver.edu/centers/risk-management-and-insurance/) for more information on this program, opportunities and scholarships.

The Risk Management and Insurance (RMI) major provides students with the fundamental knowledge needed to accurately measure and manage risk. Risk Management and Insurance professionals are found in corporate, public sector, and non-profit organizations. Risk Management is a lucrative field with a looming talent shortage, and the demand for this expertise is high. 50% of this industry is retiring in the next 5 to 10 years, so there is a huge need for new talent. The CU Denver Business School RMI program is proud to have placed 100% of its graduates in great jobs!

Recent crisis situations suggest that understanding risk and how to manage it, and ultimately, how risk management can be used to increase firm value, is essential in the current business environment. Risk Management affects all businesses, large and small, private and public. The RISK major will provide an overall perspective on risk, with a specific focus on insurance products and their use in mitigating risk in business and personal situations. The insurance industry recognizes many high-level certifications as a sign of expertise, and the RISK coursework will provide the knowledge base so that students can proceed to acquire certification in their specific choice of insurance specialty.

Potential job opportunities include positions (https://business.ucdenver.edu/centers/risk-management-and-insurance/careers-risk-management-and-insurance/) in the insurance industry and those that require a thorough understanding of risk, such as corporate risk officer or risk manager. In addition, students who choose to work in the insurance industry can make a seamless transition into underwriting, broker, claims management, loss control, or investigator positions. The program will be supported by a unique internship in the risk management or insurance industry and is the first program of its kind in the region.

The CU Denver Risk Management and Insurance (RMI) Program was named an international Global Center for Insurance Excellence (GCIE). This certification recognizes outstanding RMI Programs that play an integral role in promoting insurance knowledge and research.

Program Delivery

- The BSBA in Risk Management and Insurance (RMI) can be completed fully online or a combination of on-campus and online classes.

Industry Involvement

Unique to the RMI Program, many risk management and insurance companies, organizations and professionals support the Risk Management and Insurance Program at CU Denver. They support our students in a variety of ways by:

- Providing academic RMI Scholarships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/)
- Providing paid RMI internships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-paid-internships/)
- Sponsoring attendance at their events and monthly meetings
- Providing free student membership in RMI professional organizations (https://business.ucdenver.edu/risk-management-industry-associations/)
- Offering RMI Shadow Day (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-shadow-day/) opportunities
- Providing scholarships to attend local and national conferences
- Engaging in course curriculum and program development
- Engaging with students at student club, Gamma Iota Sigma (GIS), events
- Mentoring

Declaring This Major

- Click here (p. 134) to go to information about declaring a major. Business School students may declare their major here (https://ucdenverdata.formstack.com/forms/buscom/).

General Requirements

To earn the BSBA degree in Risk Management and Insurance (RMI), students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
FNCE 3500	Management of Business Capital [1]	3
RISK 3809	Introduction to Risk Management	3
RISK 4809	Property & Casualty Insurance	3
RISK 4909	Corporate Risk Management	3
RISK 3949	Experiential Learning in RMI Industry	3
Select three of the following:		9
RISK 4129	Practical Enterprise Risk Management	
RISK 4209	Cyber Risk Management	
RISK 4309	Strategic Risk Management	
RISK 4509	Global Risk Management [2]	
RISK 4609	Claims Management	
RISK 4709	Life and Health Insurance	
ENTP 3260	High Impact Sales for Entrepreneurs	
FNCE 3600	Financial Markets and Institutions	
FNCE 3700	Investment and Portfolio Management [1]	
FNCE 4500	Corporate Financial Decisions [1]	
Total Hours		**24**

[1] A grade of C must be earned.
[2] Also qualifies as international elective.

Note

- All RISK majors are required to complete RISK 3949 Experiential Learning in RMI Industry (internship) to fulfill BGEN Experiential Learning. The RMI Program will assist you in securing this internship.
- Each Fall and Spring semester, students have the option to apply for an RMI scholarship when they are enrolled in at least one 3-

credit RISK course, excluding RISK 3949 (one scholarship per semester). About $50,000 in RMI Scholarships each year. Apply for RMI Scholarships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/)here (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/).

Sports Business, BS in Business Administration

Introduction

Please click here (p. 130) to see Business School information.

The Sports Business major offers students the opportunity to prepare for a competitive career in the sports industry. This program was developed with industry partners who are in need of qualified leaders in the field. Sports firms are currently hiring at the entry level and promoting from within. The Sports Business major will provide you with the knowledge and skills you need to begin your career in the exciting field of sports.

The program includes faculty who are active researchers in the field, prominent guest speakers, and the opportunity to participate in exciting internships with local leaders in the industry. Some companies where students have interned include Broncos Football Club, Kroenke Sports and Entertainment, United States Olympic Committee, and Anschutz Entertainment group.

Students completing the Sports Business major are also eligible to participate in the London Calling study abroad program. This unique opportunity provides students with a firsthand look at the global sports management field through behind-the-scenes visits to key sports and entertainment organizations and venues in London. The two-week elective includes visits to the UK's top sports facilities, including Arsenal FC, O2 Arena, Wimbledon, 2012 Olympic Committee, and more.

Students enrolled in the program will learn about diverse, cross-functional areas of the sports industry, including:

- *Sports industry trends & growth opportunities*
- *Sports media trends & new media*
- *Stadium financing & development*
- *Naming rights & sponsorships*
- *Sports specific marketing plans*
- *Sports pricing & fan loyalty*
- *Negotiating contracts with athletes*
- *Team valuations*
- *Labor law and collective bargaining agreements*
- *Pro team and college athletics management*
- *Money flow in teams - managing revenue streams*
- *Outdoor sports industry - marketing & management*
- *Community relations and event planning*
- *Olympics bid process and finances*

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 134) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Code	Title	Hours
Required Courses		
MKTG 4250	Sports Marketing	3
MKTG/MGMT 4000 level course		3
Business Practices		
Select two of the following:		**6**
MKTG 4251	Music and Media Marketing	
MKTG 4252	The Business of Sports	
MKTG 4620	Customer Service Strategies	
MKTG 4730	New Product Development for Consumer and Sports Products	
Research Skills		
MKTG 3100	Marketing Research	3
or MKTG 3200	Consumer Behavior	
Sales & Communication Skills		
Select one of the following:		3
MGMT 4330	Mastering Management	
MKTG 3300	Social Media in Business	
MKTG 4000	Advertising	
MKTG 4700	Personal Selling and Sales Management	
Application		
Select one of the following:		3
MGMT 4900	Project Management and Practice	
MKTG 4050	Applied Marketing Management	
MKTG 4834	London Calling: Global Sports & Entertainment Management	
MKTG 3939	Internship	
Total Hours		**21**

Business Analytics Minor

Introduction

Please click here (p. 130) to see Business School information.

The objective of a Business Analytics minor is to give both Business and Non-Business students in-demand analytics skills focused on business problems. Students will gain skills in advanced Excel, Tableau, and SQL, as well as learning a framework for moving from business problems to data-driven solutions. A Business Analytics minor should prove useful to students who wish to focus on the quantitative aspects in business.

Students wishing to complete the Business Analytics minor need to complete the course work described under the Degree Requirements tab.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare the Business Analytics minor, students must have a 3.0 GPA, either cumulative or from their last 24 completed semester hours.

General Requirements

Students must satisfy all requirements outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Students must maintain or exceed a 2.0 GPA to graduate with the minor.
2. A student must take 12 of the 15 hours of required business courses in the minor while in residence at the University of Colorado Denver. If a student has already taken the equivalent of one or more of these courses at another university, other higher-level business courses may be substituted with the approval of the Business School.
3. Students must have declared the Business Analytics minor to register for any of the upper-division Business School courses or petition separately to take each of these courses.

Code	Title	Hours
Required Classes		
BANA 2010	Business Statistics	3
BANA 3000	Operations Management	3
BANA 4110	Business Analytics Process	3
BANA 4120	Forecasting Techniques	3
Select one of the following: [1]		**3**
FNCE 4480	Introduction to Financial Modeling	
ISMG 4400	Programming Fundamentals with Python	
ISMG/FNCE 4750	Business Intelligence and Financial Modeling	
MATH 3376	Data Wrangling & Visualization	
MKTG 3100	Marketing Research	
Total Hours		**15**

[1] Can be from the list above or any other upper-division BANA course.

Business Fundamentals Minor

Introduction

Please click here (p. 130) to see Business School information.

The Business School offers all undergraduate students at CU Denver the opportunity to add a Business Fundamentals Minor.

Students enrolled in this minor have the benefit of following their passion with their undergraduate degree, while adding the business knowledge and skills employers want and entrepreneurs need. By adding a Business Fundamentals Minor to a liberal arts, arts and media, architecture, or engineering degree, students will gain an edge in the job market.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- As a CU Denver undergraduate student, you need a 2.0 GPA to be accepted for a Business Fundamentals minor.

General Requirements

Students must satisfy all requirements outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Please see an advisor regarding residency requirements.
2. Students may only use transfer coursework in place of BMIN 1000 Introduction to Business. All remaining courses must be completed at CU Denver.
3. Students must maintain or exceed a 2.0 GPA to graduate with the minor.

Code	Title	Hours
MGMT/BMIN 1000	Introduction to Business	3
BMIN 3001	Fundamentals of Management and Marketing	3
BMIN 3002	Fundamentals of Accounting and Finance	3
BMIN 3004	Principles of Strategic Management	3
Select one of the following electives:		**3**
BLAW 3050	Business Law and Ethics	
ENTP 3200	Essentials in Entrepreneurship	
INTB 3000	Global Perspectives	
ISMG 2050	Business Problem Solving Tools	
Total Hours		**15**

Business Minor

Introduction

Please click here (p. 130) to see Business School information.

Business minors can give you an edge in your career.

By adding a business minor to a liberal arts, arts and media, architecture, or engineering degree you will gain an edge in the job market. The business minor allows you to focus on a specific area of business that fits your career goals.

The Business School offers all undergraduate students at CU Denver the opportunity to add a minor in business administration.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- As a CU Denver Undergraduate student, you need a 2.0 GPA to be accepted for a business minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 9 credits of the minor in residence at the University of Colorado Denver.
2. If the student has already taken the equivalent of one or more of these courses, other higher-level business courses may be substituted with Business School approval.
3. Students must maintain or exceed a 2.0 GPA to graduate with the minor.

Code	Title	Hours
MGMT 1000	Introduction to Business	3
or ISMG 2050	Business Problem Solving Tools	
ACCT 2200	Financial Accounting and Financial Statement Analysis [1]	3
Select three of the following:		9
BANA 3000	Operations Management [2]	
BLAW 3050	Business Law and Ethics	
ENTP 3200	Essentials in Entrepreneurship	
FNCE 3000	Principles of Finance [2]	
ISMG 3000	Technology In Business	
MGMT 3000	Managing Individuals and Teams	
MKTG 3000	Principles of Marketing	
INTB 4400	Environments of International Business [2]	
Total Hours		**15**

[1] Finite Mathematics must be completed as a pre-requisite.

[2] The courses have several required prerequisites which must be completed prior to enrolling. Check with an advisor as early as possible if you are interested in taking any of these courses. Email: undergrad.advising@ucdenver.edu

Entrepreneurship Minor

Introduction

Please click here (p. 130) to see Business School information.

The Business School offers all undergraduate students at CU Denver the opportunity to add a minor in entrepreneurship.

Students enrolled in this minor have the benefit of following their passion with their undergraduate degree while adding the business knowledge and skills employers want and entrepreneurs need. By adding a business minor to a liberal arts, arts and media, architecture, or engineering degree, you will gain an edge in the job market.

Program Delivery

- This certificate can be completed in-person, fully online, or a combination of both.

Declaring This Minor

- As a CU Denver Undergraduate student, you need a 2.0 GPA to be accepted for an entrepreneurship minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Students must take 9 of the 15 hours of required business courses in the minor while in residence at the University of Colorado Denver. If a student has already taken the equivalent of one or more of these courses at another university, other higher-level business courses may be substituted with the approval of the Business School.
2. Students must maintain or exceed a 2.0 GPA to graduate with the minor.

Code	Title	Hours
ENTP 3200	Essentials in Entrepreneurship	3
ENTP 3230	Small Business Accounting and Finance	3
ENTP 3299	Business Model Development & Planning	3
Select two ENTP electives		6
Total Hours		**15**

Finance Minor

Introduction

Please click here (p. 130) to see Business School information.

The savvy decision-makings in many fields must take into consideration the importance of financial outcomes and constraints. A Finance Minor addresses this consideration by complementing it with a degree such as mathematics, engineering, humanities, economics, among various other degrees. With this minor, you will expand upon your specialized knowledge from your major and give yourself a competitive edge in the job market.

Students wishing to complete the Finance minor need to complete the course work described below.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare the Finance minor, students must have a 3.0 GPA, either cumulative or from their last 24 completed semester hours.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Students must maintain or exceed a 2.0 GPA to graduate with the minor.
2. A student must take 12 of the 15 hours of required business courses in the minor while in residence at the University of Colorado Denver. If a student has already taken the equivalent of one or more of these courses at another university, other higher-level business courses may be substituted with the approval of the Business School.
3. Students must have declared the Finance minor to register for any of the upper-division FNCE courses or petition separately to take each of these courses.

Code	Title	Hours
Required Prerequisite and Proficiency Courses		
MATH 1060	Finite Mathematics [1]	3
ECON 2012	Principles of Economics: Macroeconomics	3
ECON 2022	Principles of Economics: Microeconomics	3
BANA 2010	Business Statistics [2]	3
Other Courses		
ACCT 2200	Financial Accounting and Financial Statement Analysis	3
FNCE 3000	Principles of Finance	3
Select three of the following:		9
FNCE 3500	Management of Business Capital	
FNCE 3600	Financial Markets and Institutions	
FNCE 3700	Investment and Portfolio Management	
FNCE 4370	International Financial Management	
FNCE 4500	Corporate Financial Decisions	
FNCE Elective [3]		
Total Hours		**27**

1. Talk to an advisor about substituting a higher-level math if needed.
2. May be substituted with ECON 3811 Statistics with Computer Applications, MATH 3382 Statistical Theory, or MATH 3800 Probability and Statistics for Engineers.
3. Can be from list above or any other upper-division FNCE course.

Information Systems Minor

Introduction

Please click here (p. 130) to see Business School information.

The Information Systems Minor provides students with an understanding of the technologies are utilized by organizations to drive business decisions and gain a competitive advantage. In depth coverage of spreadsheet tools, business intelligence systems and database systems provides students with the skills necessary to solve problems in a variety of contexts.

Students wishing to complete the Information Systems minor need to complete the course work described under the Degree Requirements tab.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- As a CU Denver undergraduate student, you need a 2.0 GPA to be accepted for an Information Systems minor.

General Requirements

Students must satisfy all requirements outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Students must maintain or exceed a 2.0 GPA to graduate with the minor.
2. A student must take 12 of the 15 hours of required business courses in the minor while in residence at the University of Colorado Denver. If a student has already taken the equivalent of one or more of these courses at another university, other higher-level business courses may be substituted with the approval of the Business School.
3. Students must have declared the Information Systems minor to register for any of the upper-division Business School courses or petition separately to take each of these courses.

Code	Title	Hours
Required Courses		
ISMG 2050	Business Problem Solving Tools	3
ISMG 3000	Technology In Business	3
ISMG 3500	Business Data and Database Management	3
Select two of the following [1]		**6**
ISMG 2800	Designing for the Web	
ISMG 3110	Data Government and Ethics	
ISMG/MKTG 3300	Social Media in Business	
ISMG 3600	System Strategy, Architecture and Design	
ISMG 4300	Information Systems Security and Privacy	
ISMG/FNCE 4750	Business Intelligence and Financial Modeling	
ISMG/MKTG 4760	Customer Relationship Management	
ISMG/ACCT 4780	Accounting and Information Systems Processes and Controls	
ISMG/MGMT 4900	Project Management and Practice	
Total Hours		**15**

[1] Can be from the list above or any other upper-division ISMG course.

Risk Management and Insurance Minor

Introduction

Please click here (https://business.ucdenver.edu/centers/risk-management-and-insurance/) for more information about this program, opportunities, and RMI scholarships available.

The Risk Management and Insurance (RMI) Minor provides students with the fundamental knowledge needed to accurately measure and manage risk. Risk Management and Insurance professionals are found in corporate, public sector, and non-profit organizations. Risk Management is a lucrative field with a looming talent shortage, and the demand for this expertise is high. 50% of this industry is retiring in the next 5 to 10 years, so there is a huge need for new talent. The CU Denver Business School RMI program is proud to have placed 100% of its graduates in great jobs!

Recent crisis situations suggest that understanding risk and how to manage it, and ultimately, how risk management can be used to increase firm value, is essential in the current business environment. Risk Management affects all businesses, large and small, private and public. The RISK major will provide an overall perspective on risk, with a specific focus on insurance products and their use in mitigating risk in business and personal situations. The insurance industry recognizes many high-level certifications as a sign of expertise, and the RISK coursework will provide the knowledge base so that students can proceed to acquire certification in their specific choice of insurance specialty.

Potential job opportunities include positions (https://business.ucdenver.edu/centers/risk-management-and-insurance/careers-risk-management-and-insurance/) in the insurance industry and those that require a thorough understanding of risk, such as corporate risk officer or risk manager. In addition, students who choose to work in the insurance industry can make a seamless transition into underwriting, broker, claims management, loss control, or investigator positions. The program will be supported by a unique internship in the risk management or insurance industry and is the first program of its kind in the region.

The CU Denver Risk Management and Insurance (RMI) Program was named an international Global Center for Insurance Excellence (GCIE). This certification recognizes outstanding RMI Programs that play an integral role in promoting insurance knowledge and research.

Other Business School majors and students in other undergraduate schools and colleges at CU Denver wishing to complete the Risk Management and Insurance minor need to complete the course work described below.

Program Delivery

- The RMI Minor can be completed fully online or a combination of on-campus and online courses.

Industry Involvement

Unique to the RMI Program, many risk management and insurance companies, organizations and professionals support the Risk Management and Insurance Program at CU Denver. They support our students in a variety of ways by:

- Providing academic RMI Scholarships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/)
- Providing paid RMI internships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-paid-internships/)
- Sponsoring attendance at their events and monthly meetings
- Providing free student membership in RMI professional organizations (https://business.ucdenver.edu/risk-management-industry-associations/)
- Offering RMI Shadow Day (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-shadow-day/) opportunities
- Providing scholarships to attend local and national conferences
- Engaging in course curriculum and program development
- Engaging with students at student club, Gamma Iota Sigma (GIS), events
- Mentoring

Declaring This Minor

- To declare the RMI minor, students must have a 2.0 GPA, either cumulative or from their last 24 completed semester hours. If you are a non-Business major, you may declare the RMI minor here (https://ucdenverdata.formstack.com/forms/busminor_declaration_for_nonbus_students/).
  If you are a Business major, you may declare your RMI minor here (https://ucdenverdata.formstack.com/forms/minor_declaration_for_business_students/).

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here for information about Academic Policies

Program Requirements

1. Students must maintain or exceed a 2.0 GPA to graduate with the minor.
2. Up to 6 of the 18 semester hours required for the minor may be completed at another institution.
3. Students must have declared the Risk Management and Insurance minor to register for any of the courses or petition separately to take each of these courses.

Code	Title	Hours
Required Prerequisite and Proficiency Courses		
ISMG 2050	Business Problem Solving Tools	3
MATH 1060	Finite Mathematics	3
BANA 2010	Business Statistics [1]	3
ECON 2012	Principles of Economics: Macroeconomics	3
ECON 2022	Principles of Economics: Microeconomics	3
ACCT 2200	Financial Accounting and Financial Statement Analysis	3

[1] BANA 2010 Business Statistics can be substituted with an upper division stats course such as ECON 3811 Statistics with Computer Applications or MATH 3800 Probability and Statistics for Engineers

Code	Title	Hours
Required Courses		
FNCE 3000	Principles of Finance	3
FNCE 3500	Management of Business Capital	3

RISK 3809	Introduction to Risk Management	3
RISK 4809	Property & Casualty Insurance	3
Other Courses		
Select two of the following:		6
RISK 4129	Practical Enterprise Risk Management	
RISK 4209	Cyber Risk Management	
RISK 4309	Strategic Risk Management	
RISK 4509	Global Risk Management	
RISK 4609	Claims Management	
RISK 4709	Life and Health Insurance	
RISK 4909	Corporate Risk Management	
FNCE 3700	Investment and Portfolio Management	
Total Hours		**18**

Notes

- Some of the prerequisite courses may be substituted on a case by case basis. Please see an advisor for details.
- Each Fall and Spring semester, students have the option to apply for an RMI scholarship when they are enrolled in at least one 3-credit RISK course, excluding RISK 3949 (one scholarship per semester). About $50,000 in RMI Scholarships each year. Apply for RMI Scholarships (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/)here (https://business.ucdenver.edu/centers/risk-management-and-insurance/rmi-scholarships/).

Commodities Certificate

Introduction

Please click here (p. 130) to see Business School information.

The Business Schools undergraduate certificates are primarily intended for students currently pursuing a degree in any undergraduate discipline that want to expand their business knowledge to give themselves a leg up when they enter the work force. However, they can also be taken by students with only a high school diploma.

Students can pursue one of our undergraduate certificates, even if they are not CU Denver students. Credit earned as a part of the certificate **does** count towards your undergraduate degree, should you choose to pursue a degree here.

The Business School awards a Certificate (of completion) in Commodities to students completing three commodities courses. Students completing the certificate will have an improved understanding of the complex commodities market. Topics covered include regulation, trading, fundamentals, investing, risk management and ethics on commodity markets. Please visit the Commodities Center website for more information - https://business.ucdenver.edu/commodities/.

Program Delivery

- This is an fully online program. Courses are taught in 8-week, asynchronous format.

Declaring This Certificate

- Please contact the Commodities Center for more information.

Entrepreneurship Certificate

Introduction

Please click here (p. 130) to see Business School information.

The Business Schools undergraduate certificates are primarily intended for students currently pursuing a degree in any undergraduate discipline that want to expand their business knowledge to give themselves a leg up when they enter the workforce. However, they can also be taken by students with only a high school diploma.

Students can pursue one of our undergraduate certificates, even if they are not CU Denver students. Credit earned as a part of the certificate **can potentially** count towards your undergraduate degree, should you choose to pursue a degree here. Check in with the academic advising team to confirm based on what major you plan to pursue.

The Jake Jabs Center for Entrepreneurship is offering an affordable program in one of the fastest growing business segments in the country - Innovation and Entrepreneurship. All courses are taught by faculty from the Jake Jabs Center for Entrepreneurship at CU Denver. You will find many opportunities including scholarships, mentoring, and networking. You will gain skills that prepare you to start a successful business or become an entrepreneurial asset to an existing company.

Benefits:

- Experiential opportunities
- Cost effective - Scholarships available
- No GPA requirements or prerequisites

Program Delivery

- This certificate can be completed in-person, fully online, or a combination of both.

Declaring This Certificate

- To declare this certificate, contact your academic advisor.
- For more details about courses and registration, contact jakejabs.center@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies
- A grade of C or higher in each course is required to earn this certificate

Program Requirements

Code	Title	Hours
Select any three, 3000-4000 level ENTP courses to complete the certificate		**9**
ENTP 3200	Essentials in Entrepreneurship	
ENTP 3201	Lean Startup Fundamentals	
ENTP 3210	Visionary Leadership for New Ventures	
ENTP 3230	Small Business Accounting and Finance	
ENTP 3240	Developing Dynamic Concepts	
ENTP 3260	High Impact Sales for Entrepreneurs	
ENTP 3299	Business Model Development & Planning	
ENTP 3900	Experiential Topics in Entrepreneurship	
ENTP 4028	Global Study Topics	
ENTP 4200	Mission Driven Entrepreneurial Mindset	
Total Hours		**9**

Risk Management and Insurance Studies Undergraduate Certificate

Introduction

Please click here (https://business.ucdenver.edu/academics/professional-development/credit-certificates/risk-management-and-insurance-undergraduate/) to see additional information about the Undergraduate Certificate in Risk Management and Insurance (RMI) Studies on the Business School website.

Broaden your knowledge of Risk Management and Insurance (RMI) by completing a one-year Certificate in RMI Studies from the University of Colorado Denver. By completing three semester-long RMI courses, all available online, and meeting prior finance course requirements, you will be on your way to enhancing your personal knowledge and providing your employer with RMI awareness and professional skills. Previous course work and some professional designations may waive the prerequisites.

The Risk Management and Insurance industry is actively seeking young talent and the RMI program has 100% job placement of our graduates at competitive salaries. 50% of this industry is retiring in the next 5 to 10 years, leaving a huge need for new talent. The pervasive reality of risk affects all individuals and organizations. Specialized knowledge and understanding of risk increase students' marketability and potential for success across a wide range of industries.

This certificate is for students currently pursuing a degree in any undergraduate discipline that wants to expand their business knowledge of risk management to give themselves a leg up when they enter the workforce. Degree-seeking students are eligible to apply for RMI scholarships each semester they are enrolled in a certificate course. However, this certificate can also be taken by students with only a high school diploma or those that have completed their degree.

Students can pursue this undergraduate certificate, even if they are not CU Denver students. Credit earned as a part of the certificate **does** count towards your undergraduate degree, should you choose to pursue a degree here.

Potential Career Opportunities in Risk Management:

• Underwriter • Broker • Risk Manager • Claims Adjustor • Risk Analyst • Account Executive • Loss Control • Agent

Add an RMI Certificate to your degree in:

• Business • Economics • Math • Actuarial Science • Criminal Justice • Information Technology • Engineering • Other Majors

See the Certificate in Risk Management (https://business.ucdenver.edu/academics/professional-development/credit-certificates/undergraduate-certificate-risk-management-and/) page for more information.

Program Delivery

- This certificate can be completed fully online or a combination of online and on-campus classes.

Declaring This Certificate

- See the Undergraduate Certificate in Risk Management and Insurance Studies (https://business.ucdenver.edu/academics/professional-development/credit-certificates/risk-management-and-insurance-undergraduate/) for more information. CU Denver students can contact their advisor to add this certificate to their degree. Non-degree students may contact lori.genuchi@ucdenver.edu for assistance enrolling or for more information.

General Requirements

- Click here for information about Academic Policies

Program Requirements

Students must satisfy all requirements as outlined below and by the Risk Management and Insurance (RMI) department offering the certificate.

Code	Title	Hours
RISK 3809	Introduction to Risk Management	3
RISK 4809	Property & Casualty Insurance	3
RISK 4909	Corporate Risk Management	3
Prerequisites:		
FNCE 3000	Principles of Finance	3
FNCE 3500	Management of Business Capital	3
Total Hours		**15**

Waiver of FNCE 3000 and FNCE 3500 prerequisite courses:

The following professional finance-related credentials considered as equivalencies:

- CMA - Certified Management Accountant
- CFM - Certified Financial Manager
- CFA - Certified Financial Analyst – (passed level 1)
- CTP - Certified Treasury Professional
- CPA - Certified Public Accountant
- FRM - Financial Risk Manager (GARP) – (passed part 1)
- CRP - Certified Risk Professional
- CBM - Certified Business Manager – (passed part 2)
- CVA/AVA - Certified/Accredited Valuation Analyst
- ARM - Associate in Risk Management (passed ARM 54 or ARM 56)
- CRM – Certified Risk Manager
- CPCU - Chartered Property and Casualty Underwriters – (passed CPCU 540)
- **Relevant** certifications outside the certification list above will be updated
- **Relevant** undergraduate or graduate degree

A committee of faculty teaching RISK 3809 and RISK 4909 will assess waiver requests for professional applicants.

Time of completion:

- Two semesters (if prerequisites waived)

Online Option:

- All courses are available online

Admission:

- Admission will be as a non-degree student. Registration is through Extended Studies.

- For further information, contact Lori Genuchi lori.genuchi@ucdenver.edu or 303-315-8153

College of Architecture and Planning

Leadership

Dean

Nan Ellin, Dean, College of Architecture and Planning (CAP)

Associate Dean

Jody Beck, Associate Dean of Academic Affairs

Department Chair

Marc Swackhamer
Email: marc.swackhamer@ucdenver.edu

Contact

CU Denver Building
1250 14th Street, Suite 2000
Denver, CO 80202
Phone: 303-315-1000
Fax: 303-315-1050
Email: CAP@ucdenver.edu
Website: https://architectureandplanning.ucdenver.edu/

Mailing Address
Campus Box 126
P.O. Box 173364
Denver, CO 80217-3364

Overview

The College of Architecture and Planning offers the only accredited master's degrees in architecture, urban and regional planning, and landscape architecture in the State of Colorado as well as the only master's degrees in historic preservation and urban design, and the only doctoral degree in geography, planning, and design. The college offers a Bachelor of Science in Architecture degree and graduate programs for over 700 students.

Students in the undergraduate architecture program can also earn a Minor in Landscape Architecture (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-architecture-planning/minors/landscape-architecture-minor/) or a Minor in Interior Design (p. 206). Programs are accredited by the Landscape Architectural Accreditation Board (LAAB), National Architectural Accrediting Board (NAAB), and Planning Accreditation Board (PAB).

Many students intending to enter the design and planning professions complete the college's undergraduate degree as preparation for our graduate-level professional programs. Those who already hold an undergraduate degree in an unrelated field are also eligible for admission into our graduate programs.

We offer graduate certificates in Design Build (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/design-build-graduate-certificate/#text), Historic Preservation (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/historic-preservation-graduate-certificate/), Integrated Construction Management and Leadership (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/integrated-construction-management-leadership-graduate-certificate/) (with Business and Engineering), Interior Design (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/interior-design-certificate/), and Landscape Architecture (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/landscape-architecture-certificate/), as well as fourteen options for earning dual graduate degrees (https://architectureandplanning.ucdenver.edu/academics/dual-degree-programs/). Students can also earn a certificate in Geospatial Information Science (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/graduate-certificates/geospatial-information-science-graduate-certificate/) with either an Urban and Regional Planning Track or a Landscape Architecture track. In addition, students can earn a Classical Studies Certificate (https://architectureandplanning.ucdenver.edu/academics/certificate-programs/#ClassicalStudies) from the Institute of Classical Architecture and Art, by taking focused courses in this area.

With an outstanding faculty committed to excellence in teaching, research, scholarship and creative work, the college provides students with opportunities beyond the classroom including study abroad, internships, mentorships, and participation in design and planning competitions. The College of Architecture and Planning ignites evolution that enriches places for people and the planet through learning by doing, practicing co-creation, and valuing the unique spark of each person as well as the full range of professional and historical traditions.

College Facilities

The college is located at 1250 14th Street in downtown Denver, on the northeastern edge of the Auraria Campus adjacent to Larimer Square. This favorable location gives easy access both to the extensive campus facilities and the urban dynamism of Denver's lively lower downtown. Most of the major professional design offices in Denver and many planning firms and agencies are nearby, offering many opportunities for contact between students and practitioners.

College facilities include studio spaces for students, lecture and seminar rooms, design jury spaces, exhibition spaces and faculty offices. Students have access to our well-equipped and well-maintained 3,000-square-foot Design Fabrication Lab that houses a full-scale wood shop, 3D print lab, a large spray booth and four laser cutters. An annex adjacent to the building provides additional fabrication space, a 5-AXIS CNC Router, metalworking equipment and a CNC Plasma cutter. The Visual Resource Center (VRC) provides access to a variety of photographic and audiovisual equipment, two portfolio photography studio rooms, and digital image collections. There are two computer labs focused on computer aided design (CAD), computer 2-D and 3-D imaging and analytic tools for planning. These computer labs include Windows PCs and Macs, small and large format scanners, large format plotters, laser printers and computer data projection devices. All systems are 100base T Ethernet / Internet savvy and accessible in secure rooms. Find more details about college facilities on the website. Also associated with the college is a geographic information systems (GIS) computer laboratory, open to all CU Denver students.

Computing in the College

The Bachelor of Science in Architecture program suggests students acquire and use their own computers and software applications during their study. Students are encouraged, but not required, to procure laptops mainly for reasons of security and mobility in studios and classrooms.

Consult with instructors or refer to course syllabi regarding applications for imaging, computer aided design, modeling or rendering before purchasing.

Professional Development

The College of Architecture and Planning supports its students in professional and career-related activities through a wide range of services and workshops. While attending CAP, students have access to our annual career fair, portfolio critiques, professional mentorship, our online job board and numerous trainings related to effective employment strategies. Being in the heart of Denver, many students work as interns in their field of study. Please visit our Career Connections website for more information.

Undergraduate Information

The#Department of Architecture at the University of Colorado Denver offers a Bachelor of Science in Architecture degree program. The program's studio-based curriculum combines critical thinking with active making in pursuit of creative solutions to contemporary design problems.

In their first 54-57 credits of study, students learn the fundamentals of design, how to apply them to the design of buildings, neighborhoods and cities, and how to graphically communicate a design solution

Before their final two semesters of the program, students have the option to choose to continue on the Architectural Studies Track or move to the Architectural Design Track. In addition to offering a strong foundation in architecture, both the Architectural Design and the Architectural Studies tracks prepare students to pursue graduate studies and future careers in allied design disciplines, including Digital Design (games and animation), Industrial Design, Graphic Design, Landscape Architecture, Urban Design, and Real Estate Development, among others.

The Architectural Studies Track offers students a less prescribed path, with greater freedom to shape the direction of their studies in the final two semesters. Based on individual interests and projected career paths, students who choose this track will have the opportunity to focus on one or more areas#of study in architecture#and/or allied disciplines. These include architectural history/theory, technology, and visualization/design among other options.

The Architectural Design Track is for students who desire additional Design Studios to hone their design skills. This track also prescribes additional history and technical course work to support design thinking and application.

Both tracks prepare students for admission to a two-year (minimum) accredited graduate architecture degree program in the United States, Canada, or compatible degree programs internationally. Advance standing in a Master of Architecture program can be maximized in either track by selecting elective courses in technical studies and professional practice typically recognized by accredited graduate architecture degree programs.

Scholarships/Financial Aid

For information on scholarships, visit the college's website. For information on federal and state financial aid, contact the

Office of Financial Aid
University of Colorado Denver
Campus Box 125
P.O. Box 173364
Denver, CO 80217-3364
303-556-2886 or visit their website. (https://www.ucdenver.edu/student-finances/financial-aid/)

Undergraduate Advising and Academic Planning

Admissions Advising

Prospective students may receive advising on course selection, admission requirements and other matters from an undergraduate staff advisor. To make an appointment, call 303-315-1000.

Admitted Students

Students admitted to the BS Architecture program are required to meet with an undergraduate academic advisor prior to registration in their first semester, as well as prior to enrolling in ARCH 2121 Design Studio II - Foundational. Students are also welcome to meet with their advisor as often as needed, in addition to the required meetings. Though the student is ultimately responsible for the decisions made regarding their academic career at CU Denver, advisors are available to assist in helping students make informed decisions.

College of Architecture and Planning Courses

Click here (p. 1016) to see a complete list of undergraduate courses.

College of Architecture and Planning Admissions Requirements

Applicants who have a cumulative 3.0 GPA and a Composite score of 24 on the ACT or 1150-1180 on the SAT Total (Math and Evidence-Based Reading and Writing) Score are considered strong candidates for admission to the College of Architecture and Planning. Applicants not meeting requirements for direct admission to the College of Architecture and Planning may be considered for admission to the College of Architecture and Planning with a Pre-Architecture interest.

College of Architecture and Planning Departments and Programs

- Architecture (p. 193)
  - Architecture, BS (p. 198)
- Minors (p. 200)
  - Interior Design Minor (p. 206)
  - Landscape Architecture Minor (p. 207)

(For Graduate Programs and information please refer to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/)catalog.)

College of Architecture and Planning Graduation Requirements

For additional information regarding Graduation policies and procedures, please visit the Graduation section of the catalog.

Foreign Language Proficiency

BS Architecture students are required to demonstrate a minimum level of proficiency in one foreign language. This requirement is met through the completion of one of the following:

- A second year (level II) high school course with minimum grade of C- or 1.7
- A second semester level college course (1020) with a minimum grade of C- or 1.7
- Satisfactory proficiency testing. Contact the CU Denver Department of Modern Languages at 303-315-7234 for details

Repeating Courses

A failed course (grade of F) may be repeated; however, the F will be included in the GPA and will appear on the transcript. Students must earn at least a C- grade in required architecture and math courses, including design studios. Required architecture courses must be repeated if the student earns less than a C- grade.

Residency Requirement

Students must complete a minimum of 30 credit hours from CU Denver. Students must also satisfactorily complete three Architecture Design Studios (18 credit hours) at CU Denver.

Undergraduate Upper-Division Requirement

Students must complete a minimum of 39 upper-division (3000-4000 level) credit hours.

Courses from Other Institutions

Grades of C- or better must be earned in courses from other institutions to receive undergraduate bachelor degree credit. Courses from other institutions will be transferred and applied based upon current transfer credit policies and limitations established by the College of Architecture and Planning and the University of Colorado Denver. Students should consult with the undergraduate academic advisor prior to taking courses from other institutions to determine applicability to BS Architecture degree requirements.

A maximum of twelve credit hours may be transferred from other institutions as Architecture electives (prefix ARCH) or CAP electives (any prefix used in the College of Architecture and Planning). Transfer credit award for Visualization courses and Design Studios are contingent upon a satisfactory portfolio review.

The maximum number of credit hours applied to individual architecture major requirements from transfer coursework must not exceed the number of credit hours given to its equivalent CU Denver course. Excess credit hours from architecture-related transfer coursework will not count toward the 120 credit hours needed for the BS Architecture degree.

AEC and CAD coursework from Emily Griffith Technical College (EGTC) and Technical College of the Rockies (TCR) will be transferred and applied toward the Architecture (ARCH) Major requirements, in accordance with the policies established for AEC and CAD courses within the Colorado Community College System. Students transferring coursework from EGTC and/or TCR should contact CAP Undergraduate Advising to initiate a request for dean's approval.

Major

Complete all requirements associated with your individual major.

Applying for Graduation

All students MUST meet with their advisor at the beginning of their final term for a graduation check-out appointment. We recommend students schedule an appointment PRIOR to the add/drop deadline of their final term in case schedule adjustments need to be made to fulfill final degree requirements. After meeting with their advisor, students should apply for graduation online through UCDAccess.

College of Architecture and Planning Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

Independent Study and Internships

Architecture students desiring to work beyond regular course coverage may take variable credit courses (1-3 hours) as either an internship or an independent study, both of which would count as architecture or CAP electives. The total combination of independent study and internship credit may not exceed 9 semester hours toward Architecture electives.

- Architecture Independent Study: A maximum of 6 semester hours of independent study credit may count toward Architecture electives. Requires department approval, including the completion of the Independent Study Worksheet with the Academic Advisor, and a faculty advisor to serve as the instructor.
- Architecture Internship: A maximum of 6 semester hours of internship credit may count toward Architecture electives. Graduate credit requires department approval, including the completion of the Special Processing Form, and the Director of Professional Development + Internships serves as the instructor. Undergraduate internships are administered through the Office of Experiential Learning.

Two independent studies or two internships will not be allowed in any one semester

Grade Appeals

The College of Architecture and Planning recognizes the right of the student to appeal a grade received in a course taken in the college. The college also recognizes the responsibility on the part of the college to respond to student grade appeals, and to do so in a judicious and timely manner

Any student wishing to appeal a course grade must first contact the course instructor to discuss issues pertaining to the student's performance, evaluation criteria, final grade, reason(s) for the appeal, and adjustment sought. If the course instructor determines that a change of grade is not warranted and the disagreement remains unresolved, the student may then initiate the formal appeal process.

Please visit the College of Architecture and Planning Student Policies, Handbooks, and Forms (https://architectureandplanning.ucdenver.edu/student-life/academic-advising/#policies) page for additional information.

Incomplete Grade Policy

The College of Architecture and Planning recognizes that a student's normal course of study may be unexpectedly interrupted owing to circumstances beyond the student's control.

It is the student's responsibility to communicate with the instructor about any such circumstance or event that may prevent full completion of coursework as outlined in the course syllabus. Further, it is the student's responsibility to provide documentation of any circumstances beyond their control prohibiting course completion (e.g. doctor's note for medical emergency), when requested by the instructor.

Incomplete grades are not awarded for poor academic performance or as a means of extending assignment deadlines. To qualify for an incomplete grade, a student will typically have completed a majority of course requirements with a passing grade. The option of an Incomplete is not guaranteed, and the decision to award an Incomplete is at the sole discretion of the course instructor. Students who feel that a denial of a request for an incomplete is unreasonable may appeal through the grade appeal process.

If an *Incomplete* is to be awarded, the student and their instructor should use the CAP Incomplete Grade Report Form to document the student's grade at the time of interrupted study, all outstanding coursework, the timeline for completion, and the expected method of collecting owed assignments (e.g. emailed written assignment, or, in-person proctored exam, etc.). This needs to be approved by the CAP Department offering the course before the Incomplete can be awarded.The student is expected to complete the course requirements within the established deadline. The student should **not** re-enroll for the entire course in a future term while the *Incomplete* is pending. While an *Incomplete* grade is pending, the course is not considered to be complete; thus, if the course serves as a pre-requisite for a future course, the student may not enroll in any dependent course until all material is completed and a passing letter grade is officially entered. Students may be administratively withdrawn from courses for which pre-requisites have not been met. The *Incomplete* grade will be automatically converted to a *Failing* grade (*F)* after one calendar year if the specified work is not completed. If the grade at time of approved Incomplete is higher than an (F), the student may request a change of record form to record the higher grade.

The student is responsible for requesting an incomplete grade and submitting all of the appropriate paperwork and obtaining approvals. Please contact CAP.UGAdvising@ucdenver.edu for additional information.

Special Grading Options

The P+/P/F or S/U grading policy may be used for a maximum of 6 credit hours toward any of the required 120 credit hours of the BS Architecture degree. Courses taken in excess of the maximum will not be applied toward degree credit. Courses taken as P+/P/F or S/U are subject to the same minimum grade standards as specified for BS Architecture degree requirements (i.e. courses that require a minimum grade of C- will require a P+ in the Pass/Fail grading policy to fulfill the degree requirement). If the P+ grade option is unavailable, courses requiring a C- or higher grade cannot be fulfilled by P+/P/F grading.

P+/P/F grading determination must be made within the deadlines posted on the academic calendar by the CU Denver Registrar's Office and may not be rescinded. ***Students are strongly encouraged to check in with CAP Undergraduate Advising before electing P+/P/F grading.***

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

Attendance Policy

Students are expected to attend all meetings of classes. Excessive unexcused absences may result in a grade reduction at the discretion of the instructor. Absence from a class will be excused for verified medical reasons, religious obligations or for extreme personal emergencies. The student may be required to furnish evidence.

TIMELINESS OF WORK

Students' assignments are to be completed in a timely manner. Any assignment turned in late may have its grade reduced by an amount set at the discretion of the instructor. An assignment may be turned in late without penalty for verified medical reasons, religious obligations or for extreme personal emergencies. Students must have their instructor's written permission to turn an assignment in late. Students with excused late work may turn in the assignment by the end of finals week without penalty. Otherwise, the grade "I" will be assigned at the discretion of the faculty.

Course Repeat Policy

A failed course (grade of F) may be repeated; however, the F will be included in the GPA and will appear on the transcript. Students must earn at least a C- grade in required architecture core courses, including design studios. Architecture core courses must be repeated if the student earns less than a C- grade.

Requisites

Prerequisites

Students must abide by all published prerequisites and corequisites, including minimum grades. The College of Architecture and Planning reserves the right to administratively drop students who enroll without the necessary prerequisites or corequisites.

Prerequisite Checking

Programs in the college are structured so that certain courses must be taken concurrently, others sequentially. Students will not be allowed to enroll in a course if its co-requisites or prerequisites have not been satisfied.

Undergraduates Taking Graduate Coursework

With prior written approval of the CAP department chair offering the course or CAP undergraduate advisor, Bachelor of Science in Architecture (BS Arch) students may take a maximum of six semester hours of graduate-level CAP elective credits. A strong candidate for approval to enroll in a graduate-level course will have a minimum 3.0 GPA and strong performance in coursework relevant to the requested graduate-level course(s). Permission to enroll in a graduate-level CAP course will not be granted until the beginning of open enrollment for the upcoming semester (please reference the CU Denver academic calendar for specific enrollment dates).

Students may complete up to 12 credit hours of graduate-level coursework to apply toward the Master of Architecture (MArch) degree at CU Denver prior to admission to the MArch program; however, completion of graduate-level coursework prior to admission does not guarantee admission to the MArch program at CU Denver. Additionally, only six credit hours of graduate-level coursework may apply (double-dip) toward both the BS Arch and MArch degrees at CU Denver. Students applying to non-CU Denver MArch programs should check with these programs directly about transferability of CU Denver CAP coursework.

Graduate-level courses from non-CAP departments must be reviewed and approved by the CAP undergraduate advisor for applicability to degree requirements.

Intra-University Transfer (IUT)

Students who want to transfer to the BS Architecture program from another college or school of the University of Colorado Denver must formally apply to the College. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form to the undergraduate advisor. Transfer forms are available at the Office of Registrar or the College Undergraduate Advising Office; transcript request forms are available at the Office of the Registrar. Transfer deadlines are August 1 for fall semester, December 1 for spring semester and May 1 for the summer session. Students must have earned a minimum of 12 University of Colorado Denver semester hours and have a 2.300 cumulative University of Colorado GPA to be eligible for an IUT to the BS Architecture program.

Other University of Colorado Campus Coursework

BS Architecture students must have the written approval of the BS Architecture director or undergraduate academic advisor to register for courses (excluding MSUD pooled courses) offered by other institutions, including other University of Colorado locations. Credit will not be given for courses taken without approval. Grades of C or better must be earned to receive the undergraduate bachelor's degree credit. Generally, only non-architecture electives or lower-division, non-architecture requirements are acceptable for transfer from other institutions once a student has been admitted to the BS Architecture Program. Students who, after admission to the college, take more than 12 semester hours from another institution, must reapply for admission to the college as transfer students and must meet the current admission requirements.

The maximum number of credit hours applied to individual architecture major requirements from transfer coursework must not exceed the number of credit hours given to its equivalent CU Denver course. Excess credit hours from architecture-related transfer coursework will not count toward the 120 credit hours needed for the BS Architecture degree.

Architecture

Department Chair: Marc Swackhamer
Telephone: 612-669-2603
Email: marc.swackhamer@ucdenver.edu

Degrees

The College of Architecture and Planning offers a pre-professional Bachelor of Science in Architecture (BSArch) degree and the professional Master of Architecture (MArch) degree which is fully accredited by the National Architectural Accrediting Board (NAAB).

(For Graduate Programs and information please refer to the **Graduate** catalog.)

Programs

- Architecture, BS (p. 198)

(For Graduate Programs and information please refer to the **Graduate** catalog.)

Faculty

Professors:

Amir Ameri, PhD, Cornell University
Julee Herdt, MArch, Southern California Institute of Architecture
Michael K. Jenson, PhD, University of Edinburgh
Laurence K. Loftin III, MArch, University of Virginia
Marc Swackhamer, MArch, Rice University
Ekaterini Vlahos, MArch, University of Colorado Denver

Associate Professors:

Osman Attmann, PhD, Georgia Institute of Technology
Christopher Koziol, PhD, University of Colorado Denver
Erik Sommerfeld, MArch, University of Colorado Denver

Assistant Professors:

Kevin Hirth, MArch, Harvard Graduate School of Design
Matthew Shea, MArch, University of Colorado Denver
Sarah Hearne, PhD, Univeristy of California Los Angeles
Assia Crawford, MArch, Newcastle University

Assistant Professors (Clinical Teaching Track):

Barbara Ambach, MArch, Southern California Institute of Architecture
Mira Woodson, MFA, University of New Mexico

Visiting Assistant Professors:

Leyuan Li, MArch, Rice

Instructors:

Matt Gines, MArch, University of North Carolina Charlotte
Jo VandenBurg, MArch, University of Colorado Denver

Visiting Teaching Fellow:

Will Koning, MArch, University of Colorado, Denver

Additional information about faculty in this department is available on the college website. (https://architectureandplanning.ucdenver.edu/)

Architecture (ARCH)

ARCH 1110 - Introduction to Architecture (3 Credits)
Introduces students to the essential ways of looking at and thinking about buildings, sites and cities, exposing students to the various perspectives, positions and practices that they will encounter in both an architecture curriculum and in architectural practice. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 1711 - Architectural Visualization I (3 Credits)
First in the sequence of two visual studies courses, this course introduces students to the fundamental principles of two and three-dimensional visual analysis and communication. Students are taught basic drawing and model-making conventions, both mechanical and digital, and how to use drawings and models as design and communication tools. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 1721 - Architectural Visualization II (3 Credits)
Second in the sequence of two visual studies courses, this course introduces students to advanced principles of two and three-dimensional visual analysis and communication. Students are introduced to advanced mechanical and digital communication techniques and the use of drawings and models as design and communication tools. Prereq: ARCH 1711 and ARCH 2111 with a C- or higher. Restriction: Restricted to undergraduate students in the College of Architecture and Planning. No co-credit with ARCH 3801. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 1711 and ARCH 2111 with a C- or higher. Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

ARCH 2111 - Design Studio I - Foundational (6 Credits)
First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq or Coreq: ARCH 1711. Restriction: Restricted to undergraduate students in the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ARCH 1711. Restriction: Restricted to undergraduate students in the College of Architecture and Planning.

ARCH 2121 - Design Studio II - Foundational (6 Credits)
Second in the sequence of two foundational design studio courses, this course introduces students to the formal and spatial vocabulary of Architecture and its organizational principles through a series of micro-scale architectural design exercises. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Prereq: ARCH 2111 with a C- or higher and ARCH 1711 with a C- or higher. Coreq or Prereq: ARCH 1721. No co-credit with ARCH 3110. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2111 with a C- or higher and ARCH 1711 with a C- or higher. Coreq or Prereq: ARCH 1721. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 2230 - Architectural History I (3 Credits)
Introduces architecture and urbanism from prehistory to the mid-seventeenth century by exploring the social, cultural, technical, philosophical and aesthetic ideas that shaped buildings and other architectural and urban settings in different parts of the world. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3111 - Design Studio III - Elemental (6 Credits)
First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq: ARCH 2121 with a C- or higher and ARCH 1721 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 3120. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 with a C- or higher and ARCH 1721 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 3121 - Design Studio IV - Elemental (6 Credits)
Second in the sequence of two elemental design studio courses, this course focuses on the design of small-scale buildings to advance students' understanding of the role of context in design communication. Students learn to translate non-formal concepts into sequential architectural experiences in deference to program and site. Prereq: ARCH 3111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 4110. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.
Typically Offered: Fall.

ARCH 3130 - Construction Practices: Material and Structural Systems (3 Credits)
Provides an overview of the materials, systems, assemblies and processes that inform the design and construction of buildings, reviewing the building technologies and developing student understandings of the interrelationship between the interconnected elements and systems that define buildings and spaces. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3230 - Architectural History II (3 Credits)
Introduces architecture and urbanism from the mid-seventeenth century to the present, exploring the forces that shaped buildings and other architectural and urban settings in different parts of the world. Prereq: ARCH 2230 with a C- or higher. Restriction: Open to all undergraduate majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 with a C- or higher. Restriction: Open to all undergraduate majors.

ARCH 3330 - Building Systems I (3 Credits)
Introduces the concepts of thermal behavior of buildings, climate as a determinant of building design, energy use in buildings, natural and mechanical means of environmental control, plumbing, electrical, communication systems, water supply and sanitation systems. Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 3340 - Theory of Structures I (3 Credits)
Introduction to the analysis and design of structural elements and focuses on the principles of statics and the strength of materials. Topics include stress determination, deflection and the behaviors of tension, compression and shear in various structural elements. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Recommended Prereq: MATH 1130 OR MATH 1110 & 1120; PHYS 2010/2030 OR PHYS 2311/2321. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 3430 - Construction Practices: Building Envelope (3 Credits)
Discusses the principles and processes of building construction and introduces the major systems and assemblies that inform construction practices. Stresses the relationship between architectural concepts and emerging building technologies, teaching students how to select appropriate materials, systems and assemblies. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3600 - Special Topics Cultural (3 Credits)
Special topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3602 - Architecture Photography (3 Credits)
Architecture elective in photography of space, interior, and exterior with an emphasis on design composition of architecture. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3690 - Cultural Research Abroad (3 Credits)
Topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking in other cultures. Work shall include preparation in culture, history and language skills in other countries. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restrictions: Restricted to Junior standing or higher.

ARCH 3691 - Cultural Design Abroad (3 Credits)
Design topics in architecture studies related to cultural inquiries including design, cultural implications of design, and/or cross cultural application of design. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restrictions: Restricted to Junior standing or higher.

ARCH 3693 - Rome: Architecture & Urbanism (3 Credits)
The objective of this course is to provide a broad overview of the city's major architectural sites, topography, infrastructure and systems of urban design and organization through the study of the rich palimpsest of buildings, piazzas and landscapes from antiquity to the present day. Coreq: ARCH 3694. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3694. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.
Additional Information: Global Education Study Abroad.

ARCH 3694 - Rome: Documentation, Analysis and Design (3 Credits)
With graphic representation as the primary mode of inquiry, this course is an intensive study of a single building, piazza or landscape within the rich urban fabric of Rome. The graphical inquiry will be supported by pre-departure research and onsite observation and presentations. Coreq: ARCH 3693. Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3693. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.
Additional Information: Global Education Study Abroad.

ARCH 3700 - Special Topics Design (3 Credits)
Special topics in architecture studies related to design inquiries including theory, design skills, and/or analytical thinking. Restriction: Restricted to ARCH-BS majors with sophomore standing. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3701 - Survival Sketching (3 Credits)
The focus of this course will be the sketchbook and the keeping of a sketchbook. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3705 - Human Centered Design, Innovation and Prototyping (3 Credits)
Introduces techniques for collaborative design by interdisciplinary teams: design thinking, problem solving, and rapid prototyping. Teams of students design and implement increasingly complex projects while acquiring essential innovation and problem-solving skills. The course will culminate in a final project chosen by each team. Cross-listed with IWKS 2100. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3706 - 3D Design, Computation, and Prototyping (3 Credits)
Introduces the design and computer-controlled fabrication of three-dimensional objects using both additive (3D printing) and subtractive (laser cutter, CNC router/mill) processes. Various commercial and open-source software tools for 3D design (CAD), manufacturing (CAM) and visualization will be explored. Increasingly complex projects throughout the semester will be used to illustrate fabrication techniques. The course will culminate in a final project. Restriction: Restricted to ARCH-BS majors with sophomore standing. Cross-listed with IWKS 3100 and 5170. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3707 - Color Theory + Application (3 Credits)
This course will explore Color perception and theory; media/medium technique/application and landscape/built-environment drawing preparation, composition and presentation. The objective is to develop your understanding of color interaction and interrelationship especially, as it pertains to the use of color in the design and implementation of the built environment. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3708 - Introduction to the Essentials of Biomimicry (3 Credits)
Biomimicry is the conscious emulation of nature's genius that can be applied to the fields of design, engineering, medicine, transportation, and social interaction. This class will be geared towards designers and will give an overview of the discipline, the (3) Essential Elements, the human-nature connection, The Biomimicry Thinking Methodology, and Life's Principles. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3709 - Furniture Design (3 Credits)
Students learn how to design and build furniture in the College's woodshop. Topics include ergonometrics, properties of materials, principles and techniques of joinery and techniques of hand and machine tools. Cross-listed with ARCH 6180. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3800 - Special Topics - Technical (3 Credits)
Special topics elective will include coursework in either Digital Media In Design courses, Design-Build site Construction, or the Science and Art of Engineering Buildings. Additional topics will be develop in conjunction with the required undergraduate technical electives. Restriction: Must be an undergraduate Architecture student with sophomore standing or higher. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3804 - Green Tech Eco-Furniture Fabrication I (3 Credits)
Green Tech I is the first of two courses that are a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3806. Cross-listed with ARCH 6375. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3806 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

ARCH 3805 - Beginning Revit (3 Credits)
Introduction to Building Information Modeling through Autodesk's Revit Architecture software. The course explores fundamental architectural concepts as they are developed and expressed in Revit. Appropriate program use and team learning experiences are emphasized. Prereq: ARCH 3110 or ARCH 2121. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. ARCH 3430 recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3110 or ARCH 2121. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher.

ARCH 3806 - Green Tech Eco-Furniture Fabrication II (3 Credits)
Green Tech II is the second of two courses that are a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3804. Cross-listed with ARCH 6376. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3804 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

ARCH 3949 - Internship I (1-3 Credits)
Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Prereq: Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

ARCH 4111 - Design Studio V - Analytical (6 Credits)
First in the sequence of two analytical design studio courses, this course introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical study of the relationship between architecture and culture. Focused on the design of small-scale buildings, students learn to incorporate structure, light, and material as expressive elements of an architectural composition. Prereq: ARCH 3121 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3121 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 4121 - Design Studio VI - Analytical (6 Credits)
Second in the sequence of two analytical design studio courses, this course advances students' understanding of the relationship between architecture and culture and their ability to design intermediate scale buildings as effective settings for cultural rituals. Students explore the role of history and precedent in the design process along with the role of detail in architectural compositions. Prereq: ARCH 4111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 credits.
Grading Basis: Letter Grade
Prereq: ARCH 4111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 4220 - A History of Theoretical Discourse on Architecture (3 Credits)
This course traces the history of theoretical discourse on architecture from the Renaissance to the present. It explore the genealogy of current theoretical stances and critical methodologies in the discipline of Architecture through the close reading of a select group of historic and contemporary texts. Prereq: ARCH 3230. Cross-listed with ARCH 6220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3230.

ARCH 4340 - Theory of Structures II (3 Credits)
Focuses on the relationship between architectural concepts and the selection of structural systems. Addresses the qualitative and quantitative analysis of reinforced concrete, steel, and wood structural systems and members. Prereq: ARCH 3340 with a C- or higher. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3340 with a C- or higher. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 4440 - Building Systems II (3 Credits)
Focuses on the environmental systems in commercial and other nonresidential buildings. Discusses natural and artificial lighting, HVAC systems, acoustics, vertical transportation and fire protection. Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 4610 - A History of American Architecture (3 Credits)
This course investigates the history of architecture in the United States as a chronological survey of buildings, architects, landscapes, and urban forms and as an exploration of the social, political, economic, technological, and similar issues that inform this built environment. Prereq: ARCH 2230 and 3230. Cross-listed with ARCH 6210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 and ARCH 3230.

ARCH 4612 - A History of Modern Architecture (3 Credits)
This course traces the various theoretical and formal developments in European and American Architecture from the end of the 19th century through the 20th century. The works of a select group of architects will be examined and discussed in relation to the diverse body of goals and objectives, ideas and ideals that constituted the Modern movements in architecture. Prereq: ARCH 2230. Restriction: Restricted to Sophomore standing or higher. Cross-listed with ARCH 6212. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 Restriction: Restricted to Sophomore standing or higher

ARCH 4711 - Research Initiative Studio (6 Credits)
An elective advanced studio, this course introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical study and research of intersections of Architecture and other fields. Focused on the design of full-scale built pro-types, students learn to incorporate structure, light, and material as expressive elements of an architectural composition. Restriction: Restricted to undergraduate students in the BS Architecture Program. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restricted: Restricted to undergraduate students in the BS Architecture Program.
Typically Offered: Fall.

ARCH 4840 - Independent Study (1-3 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to architecture. Prereq: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 4949 - Internship II (1-3 Credits)
Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Architecture, BS

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Introduction

Please click here (p. 193) to see Architecture department information.

The#Department of Architecture at the University of Colorado Denver offers a Bachelor of Science in Architecture degree program on the downtown Denver campus. The program's design studio-based curriculum combines critical thinking with active making in pursuit of creative solutions to contemporary design problems.

In their first three years of study, students learn the fundamentals of design, how to apply them to the design of buildings, neighborhoods and cities, and how to graphically communicate a design solution.

Before their final two semesters of the program, students have the option to choose to continue on the Architectural Studies Track or move to the Architectural Design Track. Both tracks will allow students to complete a 4 studio-track professional Master of Architecture degree (MAarch) at CU Denver and pursue a professional career in architecture. In addition to offering a strong foundation in architecture, both the Architectural Design and the Architectural Studies tracks prepare students to pursue graduate studies and future careers in allied design disciplines, including Digital Design (games and animation), Industrial Design, Graphic Design, Landscape Architecture, Urban Design, and Real Estate Development, among others.

The Architectural Studies Track offers students a less prescribed path, with greater freedom to shape the direction of their studies in the final two semesters. Based on individual interests and projected career paths, students who choose this track will have the opportunity to focus on one or more areas#of study in architecture#and/or allied disciplines. These include architectural history/theory, technology, and visualization/design among other options.

The Architectural Design Track is for students who desire additional Design Studios to hone their design skills. This track also prescribes additional history and technical course work to support design thinking and application.

Both tracks prepare students for admission to a two-year (minimum) accredited graduate architecture degree program in the United States, Canada, or compatible degree programs internationally. Advance standing in a Master of Architecture program can be maximized in either track by selecting elective courses in technical studies and professional practice typically recognized by accredited graduate architecture degree programs.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 190) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Architecture and Planning Graduation Requirements (p. 189)
- Click here (p. 109) for information about Academic Policies

Program Requirements

All BS Architecture students will take common required foundational courses (54-57 credit hours) to learn the fundamentals of design, how to apply them to the design of buildings, neighborhoods and cities, and how to graphically communicate a design solution. Before their final two semesters of the program, students in the BS Architecture program will choose one of two tracks with different course requirements. All students are enrolled in the Architectural Studies Track when declaring the BS Architecture major. Before the final two semesters in the program, students must choose to either stay in the Architectural Studies Track (p. 199) or opt-into the **Architectural Design Track**. Each track has 27 credits of specified course work to complete the degree. Students should meet with their CAP academic advisor for guidance on determining which track is best suited for their academic and professional goals

Below is the required course list for BS Architecture, which shows both the common curriculum for all BS Architecture majors, as well as the requirements for the individual tracks. Students will not take the requirements for both the Architectural Studies Track and the Architectural Design Track. Students will choose just one of the 27-hour track to follow:

Code	Title	Hours
Representation Studies		**6**
ARCH 1711	Architectural Visualization I	
ARCH 1721	Architectural Visualization II	
Design Studies		**24**
ARCH 2111	Design Studio I - Foundational	
ARCH 2121	Design Studio II - Foundational	
ARCH 3111	Design Studio III - Elemental	
ARCH 3121	Design Studio IV - Elemental	
Cultural Studies		**9**
ARCH 1110	Introduction to Architecture	
ARCH 2230	Architectural History I	
ARCH 3230	Architectural History II	
Technical Studies		**6**
ARCH 3130	Construction Practices: Material and Structural Systems	
ARCH 3430	Construction Practices: Building Envelope	
Math Courses/Sets [1]		**4-7**
Select one of the following sequences:		
Sequence A		
MATH 1110 & MATH 1120	College Algebra and College Trigonometry	
Sequence B		
Select one of the following:		
MATH 1130	Precalculus Mathematics	
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	

Sequence C		
MATH 1108	Stretch College Algebra-Part 1	
& MATH 1109	and Stretch College Algebra-Part 2	
& MATH 1120	and College Trigonometry	
Physics [2]		**5**
PHYS 2010	College Physics I	
PHYS 2321	Intro Experimental Phys Lab I	
Select ONE of the Required Tracks:		**27**
Architectural Studies		
15 hours of Architecture Electives (ARCH prefix)		
12 hours of CAP electives (Any prefix in the College of Architecture and Planning, except LDAR 1015)		
Architectural Design		
ARCH 4111	Design Studio V - Analytical	
ARCH 4121	Design Studio VI - Analytical	
ARCH 3330	Building Systems I	
ARCH 3340	Theory of Structures I	
ARCH 36XX--Any History/Cultural Architecture elective		
6 hours of CAP electives (Any prefix in the College of Architecture and Planning, except LDAR 1015)		
Total Hours		**81-84**

[1] Also applies to the Core Math requirement
[2] Also applies to the Core Biological and Physical Sciences requirement

Additional General elective hours may be needed to reach the required 120 hours for the BS Architecture degree. A maximum of 72 CAP credit hours (courses within the ARCH, LDAR, HIPR, INTD, and URPL prefixes) may be applied toward the 120 credit hours required for the BS Architecture degree. LDAR 1015 will not be counted toward this 72 credit hour maximum.

Required math and physics courses may apply toward General electives if not already applied toward Core Math and Biological and Physical Sciences requirements.

The following International Baccalaureate (IB) exams (Standard or Higher Level) with a four or higher exam score will fulfill the "Architecture Major: Mathematics" requirement, even without a direct course equivalency to the stated required math course(s):

- Mathematics: Applications and Interpretation
- Mathematics: Analysis and Approaches

BS Architecture Tracks:

Before their final two semesters of the program, students will choose to continue on the Architectural Studies Track or move to the Architectural Design Track. Both tracks will allow students to complete a 4 studio-track professional Master of Architecture degree (MArch) at CU Denver and pursue a professional career in architecture. In addition to offering a strong foundation in architecture, both the Architectural Design and the Architectural Studies tracks prepare students to pursue graduate studies and future careers in allied design disciplines, including Digital Design (games and animation), Industrial Design, Graphic Design, Landscape Architecture, Urban Design, and Real Estate Development, among others.

Architectural Studies Track Requirements:

The Architectural Studies Track offers students a less prescribed path, with greater freedom to shape the direction of their studies in the final two semesters. Based on individual interests and projected career paths, students who choose this track will have the opportunity to focus on one or more areas#of study in architecture#and/or allied disciplines. These include architectural history/theory, technology, and/or visualization, among other options.

Code	Title	Hours
15 hours of Architecture Electives (ARCH Prefix)		15
12 hours of CAP Electives (Any prefix used in the College of Architecture and Planning, except LDAR 1015)		12
Total Hours		**27**

NOTE: Any of the specific courses listed in the Architectural Design sub-plan may be taken and will count as ARCH electives.

Architectural Design Track Requirements:

The Architectural Design Track is for students who desire additional Design Studios to hone their design skills. This track also prescribes additional history and technical course work to support design thinking and application.

Code	Title	Hours
ARCH 4111	Design Studio V - Analytical	6
ARCH 4121	Design Studio VI - Analytical	6
ARCH 3330	Building Systems I	3
ARCH 3340	Theory of Structures I	3
ARCH 36XX--Any History/Cultural Architecture elective		3
6 hours of CAP electives (Any prefix used in the College of Architecture & Planning, except LDAR 1015)		6
Total Hours		**27**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cap/).

Minors

Programs

- Interior Design Minor (p. 206)
- Landscape Architecture Minor (p. 207)

Landscape Architecture (LDAR)

LDAR 1015 - Engaging Landscapes for Wicked Change (3 Credits)
This course will offer students the tools and perspectives to understand how landscapes impact them and others, analyze and describe the forces that inform landscape form, and propose changes to landscapes that will address the wicked problems of our time. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

LDAR 3601 - Intro to Landscape Arch: Engaging Designed Landscape (3 Credits)
This course is an overview of the historical development, social context and contemporary practice of landscape architecture, which has existed as a profession for over 120 years and has been practiced in one form or another for millennia. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 3690 - Landscape Architecture in Other Cultures (1-9 Credits)
Study abroad. Various studies of landscape architecture, architecture, urbanism, and design to destinations outside of the continental United States. Cross-listed with LDAR 6520. Restriction: Restricted to Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to Junior standing or higher.

LDAR 4420 - Landscape Architecture Theory and Criticism (3 Credits)
Explores and assesses theory in landscape architecture and the concepts, ideas and discourses underlying contemporary design approaches. Emphasizes developing critical understanding of the roles and agency of theoretical inquires in landscape architecture in relation to aligned disciplines. Restriction: Restricted to undergraduate students in the College of Architecture and Planning or instructor permission. Cross-listed with LDAR 6620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Spring.

LDAR 4421 - History of Landscape Architecture (3 Credits)
Intro survey course fosters workable understanding of landscape architecture design history and theory and offers a base for understanding trends and ideas influencing contemporary practice. Emphasizes Western Europe and the United States from antiquity to early twentieth century. Prereq: Sophomore standing or higher. Cross-listed with LDAR 5521. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students must be of sophomore-, junior-, or senior-level standing

LDAR 4430 - Site, Society and Environment (3 Credits)
Sites are defined by relationships within environmental and social settings. Therefore site design should be primarily ethical and secondarily technical. This course examines the implications of this idea through site methodologies, conceptual construction of site, site analysis and site typologies. Restriction: Restricted to students with sophomore standing or higher. Cross-listed with LDAR 6630. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students with sophomore standing or higher

LDAR 4432 - Landform Manipulation (3 Credits)
Focuses on the fundamental technical aspects of landscape architectural design and site engineering of related topography, grading, drainage design, landform manipulation, earthwork calculations, and road alignment. Restriction: Restricted to undergraduate students in the College of Architecture and Planning or instructor permission. Cross-listed with LDAR 5532. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

LDAR 4435 - Community Engaged Design Practice (3 Credits)
Obtain real-world pre-design and conceptual design experience in complex urban environments focusing on evolving trends in sustainability. Using digital trans-disciplinary learning students will develop comprehensive sustainable strategies that draw from their own sustainable philosophy developed during this class. Cross-listed with LDAR 6635 and ARCH 6257. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 4436 - Urban and Local Food Systems (3 Credits)
In this seminar, we will examine the connections between landscape architecture and food production in cities as well as the role that food production plays in rural landscapes. The course material may be historical, theoretical, or oriented toward contemporary research. Cross-listed with LDAR 6636. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 4470 - Plants in Design (3 Credits)
Explores the challenges, opportunities and responsibilities of designing with living, growing, and ever-changing organisms. Students learn to identify plants that are commonly used in the Colorado region and the principles, theories, methods, and techniques for planting design. Restriction: Restricted to undergraduate students at a junior standing or higher. Cross-listed with LDAR 6670. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

LDAR 4472 - Ecology for Landscape Architects (3 Credits)
Course emphasizes continuity and change in an ecology of the natural and man-made landscape. Focuses on biological, geophysical, cultural, and perceptual factors involved in landscape, spatial organization, and urban and regional structure. Introduces field ecology for landscape architecture. Restriction: Restricted to undergraduate students in the College of Architecture and Planning, or instructor permission. Cross-listed with LDAR 5572. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

LDAR 4486 - Special Topics in Landscape Architecture (3 Credits)
Lectures, discussion, and projects exploring topics in landscape architecture drawn from current practice, contemporary issues of design and the built environment, and/or landscape history and theory. Focus and content vary each term. Prereq: Sophomore standing or higher. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Students must be of sophomore-, junior-, or senior-level standing

LDAR 5501 - Landscape Architecture Design Studio 1 (3 Credits)
Introduction to basic strategies, methods and techniques of landscape architectural design and representational techniques. Explores fundamental issues of spatial form and landscape experience and meaning. Prereq: LDAR 5510. Restriction: Restricted to graduate majors within the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: LDAR 5510. Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 5502 - Landscape Architecture Design Studio 2 (6 Credits)
Problem-based studio course covers strategies, methods and techniques of landscape architectural design with emphasis in more complex social and urban issues, design processes and development and the application of theory and research. Prereq: LDAR 5501 and LDAR 5540 or GEOG 4080/5080, or permission of instructor. Restriction: Restricted to graduate majors within the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: LDAR 5501 and LDAR 5540 or GEOG 4080/5080. Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 5503 - Landscape Architecture Design Studio 3 (6 Credits)
Problem-based studio covering the approaches, techniques and means for planning and designing sites to accommodate development program on a particular site within an identifiable context. Covers issues definition, site analysis, programming, development of design strategies, evaluation site planning, and communication. Prereq: LDAR 5501 and LDAR 5502 or permission of department chair. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 5510 - Graphic Media in Landscape Architecture (3 Credits)
Introduces basic principles and methods associated with analog and digital drawing-plan, sections, perspectives, color, shading, composition and projection. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 5521 - History of Landscape Architecture (3 Credits)
Intro survey course fosters workable understanding of landscape architecture design history and theory and offers a base for understanding trends and ideas influencing contemporary practice. Emphasizes Western Europe and the United States from antiquity to early twentieth century. Cross-listed with LDAR 4421. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate level or senior level or higher students

LDAR 5530 - City Design Fundamentals (3 Credits)
Investigates the historical roots, spatial patterns, and physical forms of cities and their evolution over time; the environmental, cultural, and economic forces influencing city design; and urban design as the nexus of the planning and design professions in contemporary city-building. Cross-listed with URPL 6350, URBN 6525, and ARCH 6270. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate students within the College of Architecture and Planning

LDAR 5532 - Landform Manipulation (3 Credits)
Focuses on the fundamental technical aspects of landscape architectural design and site engineering of related topography, grading, drainage design, landform manipulation, earthwork calculations, and road alignment. Prereq: LDAR 6641 or higher or permission of instructor. Cross-listed with LDAR 4432. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: LDAR 6641 or higher or permission of instructor.
Typically Offered: Spring.

LDAR 5540 - Introduction to GIS (3 Credits)
An introduction to GIS as a set of strategies, methods and techniques used to facilitate the inventory and analysis of complex systems. Restriction: Restricted to graduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Graduate level students.
Typically Offered: Spring, Summer.

LDAR 5572 - Ecology for Landscape Architects (3 Credits)
Course emphasizes continuity and change in an ecology of the natural and man-made landscape. Focuses on biological, geophysical, cultural, and perceptual factors involved in landscape, spatial organization, and urban and regional structure. Introduces field ecology for landscape architecture. Restriction: Restricted to graduate students. Cross-listed with LDAR 4472. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Graduate level students.

LDAR 5573 - Advanced Landscape Ecology (3 Credits)
Critically investigates the performance of complex landscape systems on multiple spatial and temporal scales, with emphasis on the interaction of human and non-human systems. May address issues of sustainability, disaster recovery, mitigation, etc. Prereq: LDAR 5572 or permission of instructor. Restriction: Restricted to graduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: LDAR 5572 or permission of instructor. Restriction: Restricted to graduate students.

LDAR 6470 - ACE Mentoring (3 Credits)
Graduate students work with professional architects, designers, and engineers mentoring students in selected local high schools to learn problem solving, graphics and model making to produce a design project. Student mentors develop lesson plans, outcomes and keep a weekly journal. Cross-listed with ARCH 6470 and URPL 6850. Restriction: Restricted to majors within the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6520 - Landscape Architecture in Other Cultures (1-9 Credits)
Study abroad. Various studies of landscape architecture, architecture, urbanism, and design to destinations outside of the continental United States. Cross-listed with LDAR 3690. Restriction: Restricted to majors within the College of Architecture and Planning. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6604 - Landscape Architecture Design Studio 4 (3 Credits)
Intermediate landscape design studios engage design projects and topics that cover diverse design approaches, contexts, and landscape processes at various scales and complexities. Design projects will vary. Students are expected to expand their graphic, oral communication, and design skills.. Prereq: LDAR 5501, 5502, 5503 or permission of department chair. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6605 - Landscape Architecture Design Studio 5 (3 Credits)
Intermediate landscape design studios engage design projects and topics that cover diverse design approaches, contexts, and landscape processes at various scales and complexities. Design projects will vary. Students are expected to expand their graphic, oral communication, and design skills. Prereq: LDAR 5501, 5502, 5503, 6604 or permission of department chair. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6606 - Landscape Architecture Design Studio 6 (6 Credits)
Advanced design studio covering landscape change in diverse contexts at various scales and complexities. Recommended: completion of 2 graduate level landscape studios or permission of department chair. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate students within the College of Architecture and Planning

LDAR 6607 - Landscape Architecture Design Studio 7 (3 Credits)
Advanced landscape design studios engage design projects and topics that cover diverse design approaches, contexts, and landscape processes at various scales and complexities. Design projects will vary. Students are expected to demonstrate mastery of graphic, oral communication, and design skills. Prereq: LDAR 5501, 5502, 5503, 6604, 6605, 6606 or permission of department chair. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6608 - Landscape Architecture Design Studio 8 (3 Credits)
Advanced landscape design studios engage design projects and topics that cover diverse design approaches, contexts, and landscape processes at various scales and complexities. Design projects will vary. Students are expected to demonstrate mastery of graphic, oral communication, and design skills. Prereq: LDAR 5501, 5502, 5503, 6604, 6605, 6606, 6607 or permission of department chair. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6620 - Landscape Architecture Theory and Criticism (3 Credits)
Explores and assesses theory in landscape architecture and the concepts, ideas and discourses underlying contemporary design approaches. Emphasizes developing critical understanding of the roles and agency of theoretical inquires in landscape architecture in relation to aligned disciplines. Cross-listed with ARCH 3620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6625 - Landscape Architecture Field Studies (3 Credits)
Critical field evaluation of built works of landscape architecture using methodological approaches like field measurement, mapping, sketches, photography, written evaluations and applied research. It may also assess the performative aspects of designed landscapes. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6630 - Site, Society and Environment (3 Credits)
Sites are defined by relationships within environmental and social settings. Therefore site design should be primarily ethical and secondarily technical. This course examines the implications of this idea through site methodologies, conceptual construction of site, site analysis and site typologies. Restriction: Restricted to graduate majors within the College of Architecture and Planning. Cross-listed with LDAR 4430. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6631 - Landscape Construction Materials and Methods (3 Credits)
Develops understanding of detailed design processes, construction materials and selection of construction methods and documents. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6632 - Site Planning (3 Credits)
Focuses on site planning processes, criteria and decision-making. Includes research, site analysis, and data synthesis as they relate to site context and design concepts. Also addresses site work (grading and drainage, utilities), cost computation, and creating site and building program. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6635 - Community Engaged Design Practice (3 Credits)
Obtain real-world pre-design and conceptual design experience in complex urban environments focusing on evolving trends in sustainability. Using digital trans-disciplinary learning students will develop comprehensive sustainable strategies that draw from their own sustainable philosophy developed during this class. Cross-listed with ARCH 6257 and LDAR 4435. Restriction: Restricted to graduate students within the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate students within the College of Architecture and Planning

LDAR 6636 - Urban and Local Food Systems (3 Credits)
In this seminar, we will examine the connections between landscape architecture and food production in cities as well as the role that food production plays in rural landscapes. The course material may be historical, theoretical, or oriented toward contemporary research. Cross-listed with LDAR 4436. Restriction: Restricted to graduate students. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Graduate level students.

LDAR 6637 - Social Justice in Planning (3 Credits)
This course investigates various social justice issues encountered in planning, including conflict resolution; advocacy; environmental justice; social equity; culture and diversity; disadvantaged populations; public engagement techniques; affordability; equal access; and policy impacts. Cross-listed with URPL 6410 and ARCH 6258. Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Architecture graduate students within the College of Architecture and Planning

LDAR 6641 - Computer Applications in Landscape Architecture (3 Credits)
Introduces digital technologies and methods commonly used in landscape architecture including primarily CADD, visualization, graphic design, and other emerging applications. Includes hands-on exercises. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6642 - Landscape Architecture Digital Design Workshop (3 Credits)
Provides hands-on experiences in the principles, software, and theories for emergent 3-D and 4-D design in landscape architectural practice and research. Prereq: LDAR 6641. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: LDAR 6641 Restriction: Restricted to majors within the College of Architecture and Planning

LDAR 6655 - Urban Ecology (3 Credits)
This lecture/seminar will cover ecological principles as applied to urban systems (lecture portion) and students will do an intensive study, presentation, and discussion on the topic of their choosing (seminar portion). Cross-listed with URPL 6547. Restriction: Restricted to graduate students in the College of Architecture and Planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate CAP students.

LDAR 6670 - Plants in Design (3 Credits)
Explores the challenges, opportunities and responsibilities of designing with living, growing, and ever-changing organisms. Students learn to identify plants that are commonly used in the Colorado region and the principles, theories, methods, and techniques for planting design. Restriction: Restricted to graduate majors within the College of Architecture and Planning. Majors and minors outside of landscape architecture and non-degree seeking students can ask the Department Chair for course permission. Cross-listed with LDAR 4470. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6671 - Plant Material Identification (3 Credits)
Students learn the names, characteristics and site requirements of plants including trees, shrubs, ground covers and perennials commonly used in built works in the Colorado region. Methods are transferable to other regions. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6686 - Special Topics: Landscape Architecture (3 Credits)
Various topical concerns are offered in landscape architecture history, theory, elements, concepts, methods, implementation strategies, and other related areas. Restriction: Restricted to graduate students. Repeatable. Max hours: 21 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 21.
Restriction: Restricted to students with graduate standing.

LDAR 6706 - Advanced Landscape Architecture Design Studio Immersive I (4 Credits)
Advanced design studio forms core of the Immersive experience; covers landscape change in diverse contexts at various scales and complexities. Travel competent also required (LDAR 6707). Recommended: complete 2 previous landscape graduate studios or permission of department chair. Coreq: LDAR 6707 and LDAR 6740 or LDAR 6745. Max hours: 4 Credits.
Grading Basis: Letter Grade
Coreq: LDAR 6707 and LDAR 6740 or LDAR 6745.

LDAR 6707 - Advanced Landscape Architecture Design Studio Immersive II (2 Credits)
Advanced design studio forms core of the Immersive experience; covers landscape change in diverse contexts at various scales and complexities. Travel anticipated. Recommended: complete 2 previous landscape graduate studios or permission of department chair. Coreq: LDAR 6706 and LDAR 6740 or LDAR 6745. Max hours: 2 Credits.
Grading Basis: Letter Grade
Coreq: LDAR 6706, and LDAR 6740 or LDAR 6745.

LDAR 6711 - Advanced Graphics Landscape Architectural (3 Credits)
Focuses on developing practical and applied expertise in various manual and digital visualization and representation techniques and media used for enhanced effectiveness in visual communication. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6712 - Green Roofs/Living Systems (3 Credits)
The primary objective for this seminar is to give students a general understanding of green roof systems, vegetated roofs above underground architecture and vertical vegetated systems. The seminar will engage in critiques and discussions using international, national and local case studies, covering history, typologies, function, design, master planning and costs. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6720 - Finding Common Ground (3 Credits)
Focuses on principles and societal variables that influence the structure of urban neighborhood space through research application. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6722 - Contested Terrains (3 Credits)
Explores the different processes, factors and forces that determine and influence occupation, land use and built form through the phenomena of conflict and contestation. Design is inherently located within the disputes and discourses involving landscape as location and resource. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6723 - Cinema and the Landscape (3 Credits)
Explores the relationships between landscape and film through theoretical and practical investigations. Explores film's roles in understanding and investigating landscapes, their dynamic qualities and processes, and issues related to film's capacity to construct spatial meaning. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6724 - American Landscapes (3 Credits)
Historical, theoretical and critical evaluation of the development of American landscapes. May cover the economic, philosophical and social trends behind changes in the landscape as well as the intellectual and contextual changes to the theory and practice of landscape architecture. Prereq: LDAR 5521 Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6725 - Design Communications (3 Credits)
In this seminar students will learn research and writing skills to produce articles in clear, readable, and substantial prose, from academic criticism to general interest reviews; writing forms and styles, including essays, reports, award applications and writing for oral presentation; and editing basics. Prereq: History and/or theory of landscape architecture or architecture. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6735 - The Landscape of Food (3 Credits)
An examination of the reciprocal relationships between landscapes and patters of food production, distribution, and consumption. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6740 - Advanced History/Theory Seminar - Immersive Semester (3 Credits)
Investigates topical issues in landscape architecture history/theory, process and methods within the framework of themes/issues running through the immersive semester course of study. Coreq: LDAR 6706. Restriction: Restricted to graduate CAP students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: LDAR 6706. Restriction: Restricted to graduate CAP students.

LDAR 6741 - Urban Design Process (3 Credits)
Advances current practice by exploring innovative methods of design analysis, production, representation, and communication. Community participation and civic engagement are integral components of seminar. Cross-listed with URBN 6641 and URPL 6398. Restrictions: Restricted to Graduate level students in the college of Architecture and Planning. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate Level students in the College of Architecture and Planning.

LDAR 6745 - Advanced Media/Technology Seminar - Immersive Semester (3 Credits)
Advances landscape architectural practice by exploring innovative methods of design analysis, production, representation, and communication. Community participation and civic engagement are integral components of this seminar aligned with the immersive studio core track. Coreq: LDAR 6706. Restriction: Restricted to graduate CAP students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: LDAR 6706. Restriction: Restricted to graduate CAP students.

LDAR 6750 - Professional Practice (3 Credits)
Explores the essential elements of professional practice and equips students with the fundamental knowledge and skills requisite to understand and participate in this practice. Covers office organization, project management, contracts, professional ethics and non-traditional careers. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to graduate majors within the College of Architecture and Planning.

LDAR 6755 - Urban Housing (3 Credits)
This course examines housing trends and patterns; supply and demand factors; housing policies; housing challenges (e.g., inequitable distribution, special needs, segregation/discrimination, and homelessness); sociological, demographic, and economic considerations; and the roles of planners and the public and private sectors. Cross-listed with ARCH 6205 and URPL 6405. Restriction: Restricted to graduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students with graduate standing.

LDAR 6840 - Independent Study (1-3 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to landscape architecture or urban design. Restriction: Graduate level students. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Graduate level students.

LDAR 6850 - GIS Capstone (3 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to GIS. Serves as Capstone for LA GIS certificate. Restriction: Graduate level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Graduate level students.

LDAR 6930 - Landscape Architecture Internship (3 Credits)
This experiential learning course provides students the opportunity to participate in and reflect on the practice of landscape architecture by working in a design office. Students will reflect on and critically analyze issues such as leadership, management and collaboration. This course may only be taken once during a student's academic career and is to be taken after the first year of graduate study. Restriction: Graduate level students. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Graduate level students.

LDAR 6949 - Research Tools & Methods (3 Credits)
Introduces students to research in landscape architecture and related fields and disciplines. Provides students with research practices, methods, and methodologies and a critical framework to identify suitable approaches based on diverse projects and contexts. Supports studio, independent study and thesis. Restriction: Restricted to graduate students. Cross-listed with ARCH 6473. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students with graduate standing.
Typically Offered: Fall.

LDAR 6950 - Thesis Research (3 Credits)
Student works closely with a landscape architecture faculty advisor and thesis committee to develop the thesis through focused research. Research might entail both written and graphic inquiry leading to specific products with conclusive ideas setting the stage for final thesis. Restriction: Graduate level students. Max hours: 3 Credits.
Grading Basis: Letter Grade with IP
Restriction: Graduate level students.
Additional Information: Report as Full Time.

LDAR 6951 - Landscape Architecture Thesis (6 Credits)
The Landscape Architecture thesis is expected to advance the field of landscape architecture by offering new insights into aspects of design, technology, history or professional principles. In this course, the student continues to work independently, but closely with a landscape architecture faculty advisor and thesis committee to complete the thesis. The thesis might take on different final forms (written volume, drawings, maps, digital images), depending on the subject inquiry. For further information on the Landscape Architecture Thesis Track consult the Landscape Architecture Thesis Guidelines. Restriction: Graduate level students. Max hours: 6 Credits.
Grading Basis: Letter Grade with IP
Restriction: Graduate level students.
Additional Information: Report as Full Time.

Interior Design Minor

Program Chair: Sarah McGarry
Telephone: (303) 315-1000
E-mail: sarah.mcgarry@ucdenver.edu

The Interior Design program at CAP teaches fundamentals of interior design through a holistic, integrated, and experiential approach. Interior design combines the pragmatics of space planning and programming with the poetics of human experience and placemaking. Interior Design is a field that complements other offerings in the College of Architecture and Planning and provides those pursuing other degrees with an opportunity to amplify their skills and distinguish themselves in the marketplace.

CAP offers the only Interior Design program in the State of Colorado that benefits from having Architecture, Landscape Architecture, and Planning programs. This program will offer students a grounding in the fundamental skill and concepts for interior design and technical practice.

The minor is a 15-credit hour program.

Eligibility

- All undergraduate students at CU Denver are eligible to minor in Interior Design.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Students declaring a minor must complete the online application form found here (https://architectureandplanning.ucdenver.edu/). Failure to submit an official declaration of minor application form may result in the inability for CAP to award the minor upon students' completion.

Curriculum

The Minor in Interior Design requires students to complete four classes in the Department of Interior Design for a total of 15 hours. The following are all required core classes.

Code	Title	Hours
Core Requirements (9 hours)		
INTD 2000	Global History & Theory of Interior Design	3
INTD 3100	Drawing Out the Interiors	3
INTD 4200	Interior Design Workshop	3
Electives (6 hours)		
6 hours of additional INTD coursework		6
Total Hours		**15**

Grade Requirements

Students must earn at least a C- grade in all required courses for the minor. Required courses must be repeated if the student earns less than a C- grade.

Transfer Credits

Transfer credits maybe reviewed on a case-by-case basis, for a maximum of 6 credit hours for transfer hours, 9 credit hours must be completed at CU Denver including INTD 4200 Interior Design Workshop

Undergraduates Taking Graduate Coursework

A maximum of 6 credit hours of INTD coursework can be taken at a graduate level (5000-6000) during a student's undergraduate program to be applied towards both BS arch undergraduate electives and the INTD Graduate Certificate. Undergraduate INTD coursework will not apply to the INTD Graduate Certificate.

Landscape Architecture Minor

Program Chair: Louise Bordelon, PhD
Telephone: (303) 315-1000
E-mail: louise.bordelon@ucdenver.edu

Introduction

Landscape Architecture is significantly more than the design of outdoor spaces. It is at the forefront of the green building movement, environmental justice, and sustainability, and can advance social equity while celebrating cultural diversity. Our Minor in Landscape Architecture opportunity will allow undergraduates to engage in our field and explore options for graduate education beyond their ARCH undergraduate degree.

The Minor in Landscape Architecture will offer students a grounding in the fundamental skills and concepts of landscape architecture as a social and a technical practice. This minor will give students a specialized perspective whether pursuing a career in design or any other field that engages with people in the built environment.

The minor is a 12-credit hour program, which can be completed in conjunction with the BS ARCH Studies Track.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 190) to go to information about declaring a minor.

Admissions

Application to the Minor in Landscape Architecture is open to all students enrolled in the BS ARCH program who are in good academic standing in the College of Architecture and Planning.

Schedule a meeting with your undergraduate BS Arch academic advisor (https://architectureandplanning.ucdenver.edu/architecture/academics/academic-advising/) for help with declaring the Minor in Landscape Architecture.

Required Materials

No specific materials are required – BS Arch students can take the classes required for the minor as electives; however, they need to declare for the minor with their academic advisor to have it transcripted.

Curriculum

The Minor in Landscape Architecture requires students to complete four classes in the Department of Landscape Architecture for a total of 12 hours. The following are all required core classes.

Code	Title	Hours
LDAR 3601	Intro to Landscape Arch: Engaging Designed Landscape	3
or LDAR 4421	History of Landscape Architecture	
LDAR 4430	Site, Society and Environment	3
LDAR 4432	Landform Manipulation	3
LDAR 4472	Ecology for Landscape Architects	3
Total Hours		**12**

GPA Requirements

Students must earn at least a C- grade in all required courses for the minor. Required courses must be repeated if the student earns less than a C- grade. A cumulative GPA of 2.0 or higher is required in the courses for the minor.

Transfer courses (3000-level or above) are allowed on a case-by-case basis by Chair approval.

Application of Credits toward MLA Program

Students who complete the 12-hour Minor in Landscape Architecture are eligible to apply the credits toward the Master of Landscape Architecture (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/landscape-architecture/) (MLA) program (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/landscape-architecture/) (https://catalog.ucdenver.edu/cu-denver/graduate/ (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/landscape-architecture/) schools-colleges-departments/college-architecture-planning/landscape-(https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/landscape-architecture/) architecture/ (https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-architecture-planning/landscape-architecture/)). A grade of B- or higher is required for the courses to be considered for advanced standing.

Students who opt to take LDAR 5540 Introduction to GIS (or GEOG 4080 Introduction to GIS) and LDAR 6620 Landscape Architecture Theory and Criticism in addition to the 12-hour minor curriculum are eligible to obtain advanced standing credit for the entire first year of the MLA program.

Students must obtain a B- or higher in all 6 courses. This reduces the MLA program to a 2-year course of study, rather than 3 years.

Students applying for advanced standing are subject to a portfolio review and must submit an official application to the MLA program, regardless of their standing as a current student enrolled in the undergraduate Minor in Landscape Architecture.

Courses in the Landscape Architecture Minor are offered on a fall-only and spring-only basis.

Course	Title	Hours
Fall		
LDAR 3601 or LDAR 4421	Intro to Landscape Arch: Engaging Designed Landscape or History of Landscape Architecture	3
LDAR 4470	Plants in Design	3
	Hours	**6**
Spring		
LDAR 4430	Site, Society and Environment	3
LDAR 4432	Landform Manipulation	3
	Hours	**6**
	Total Hours	**12**

College of Arts & Media

Leadership

Interim Co-Deans

Joann Brennan, MFA, Massachusetts College of Art, Photography

Nate Thompson, MFA, University of North Carolina School of Arts, Technical Direction

Associate Dean

Mark Rabideau, DMA, Associate Dean for Academic and Faculty Affairs

Assistant Dean

Karen Ludington, MBA, Assistant Dean for Budget and Financial Systems

Contact

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Mailing Address
College of Arts & Media
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Denver, CO 80217-3364

National Center for Media Forensics
Campus Box 154
P.O. Box 173364
Denver, CO 80217-3364
Email: ncmf@ucdenver.edu

Overview

Mission

Our mission is to effect change by preparing students to successfully pursue their passions.

Our students acquire the skills they need to excel in an academically rigorous, experiential learning environment energized by creative exchange, real-world experience and diversity of voice.

Core Values

Creative Excellence - Academic and artistic rigor, creativity and innovation are bedrock principles of the CAM community and the cornerstone of how we define excellence. As champions of creative excellence in art making and artistic expression we support risk-taking, intellectual freedom and social responsibility.

Discovery - We believe in a culture of shared discovery. Our students learn by doing, and as emerging peers, are important contributors to the knowledge exchange. We value rigorous investigation, critical thinking, diversity, collaboration and invention.

Denver - We are committed to learning both inside and outside the classroom. The accessibility, diversity and cultural energy of Denver make CAM a better place to teach, work and learn. We strive to offer reciprocal experiences to the citizens of this great city and pay it forward by extending our reach and impact in the global community.

Facilities

CAM is committed to both traditional and new technologies and celebrates the dynamic synergy between the two. CAM students can take advantage of superb studios, laboratories, editing facilities, equipment, screening rooms, galleries and performance spaces on campus. Students across all three CAM departments create work in computer labs where equipment and software are upgraded regularly. Most CAM studios are open for use by enrolled CAM students when classes are not scheduled. However, policy mandates that all equipment can only be used for class related projects. CAM is constantly working to enhance and add to its facilities; see below for just some of the resources.

Music & Entertainment Industry Studies Facilities

- Five recording studios
  - Three studios include surround sound capabilities
  - All studios are ProTools equipped
- Large inventory of microphones and outboard equipment available
- Vintage keys collection, including DX-7, ARP Odyssey, ARP 2600, MiniMoog, PolyMoog, D-10, Hammond B3 and Rhodes
- MIDI lab featuring ProTools, Logic and Ableton Live; supplemental access to three CAM computer labs
- Consoles, including SSL AWS 924, Yamaha DM2000, AVID S6 and Mackie 32x8 Bus, as well as an Avid Artist Control Surface
- 16-station piano lab featuring Apple Macintosh iMac computers with a wide selection of musical and songwriting/composition software applications
- Eight performance teaching studios
- 12 practice suites
- Private teaching studios for voice, piano, guitar, bass, drum kit and percussion
- Audio/video forensics labs at the National Center for Media Forensics
  - Computer lab featuring multimedia analysis and processing software such as Cognitech, Ocean Systems, DAC, Agnitio, iZotope Rx Advanced, Adobe Creative Cloud, MATLAB, EnCase, Cellebrite and CEDAR Cambridge hardware/software systems
  - Security DVR and camera lab
  - Graduate student workstations accessible from anywhere in the world via Remote Desktop Connection
  - ENF (Electric Network Frequency) databases around the US

Visual Arts Facilities

- Photography labs with black-and-white, non-silver, digital imaging and color capabilities, and large-format digital, color, and black and white printing (four large wet labs, individual color darkrooms, an RA4 color processor, an alternative process darkroom and a fully-outfitted digital lab with large-format Epson printers).
- Transmedia sculpture lab with wood shop, metal shops and a foundry, as well as digital facilities (metal and wood fabrication, mold casting/design, digital modeling, electronic art, foundry casting, and teaching gallery).
- Drawing and painting studios with flexible open space and excellent natural and studio lighting (studio classrooms with roll-out computers, projectors and small monotype presses, screen printing facilities, digital lab access and large format printing).

- Digital design labs, computer labs, sound booths, editing suites, and video and digital cameras for student use
- Digital Animation Center computer labs and motion capture studio
- Illustration studios including state-of-the-art computer labs using Adobe software and open hands-on studio facilities (design, drawing, painting, printmaking, 3D sculpting equipment).
- Emmanuel Gallery and Next Stage Gallery, public arts spaces for student and faculty exhibitions and special exhibition events
- Community partnerships with the Museum of Contemporary Art Denver, Redline Gallery, the Denver Performing Arts Center and more.

Film & Television Facilities

- Several Apple computer labs utilizing the Adobe Creative Suite as well as other industry-level software applications
- Equipment cage stocked with state-of-the-art tools for video production, including 4-6K cameras, HD cameras, lighting, sound and grip equipment
- Three "black box" production studios
- Scenic shops: wood, metal and paint
- Three full-size green screens
- Auraria Media Center, with two 3-camera TV studios with full control rooms, isolation booth and lighting control
- 120-seat movie theatre/classroom with a 2K projector and surround sound

Kenneth King Academic and Performing Arts Center

- 520-seat Concert Hall
- 268-seat Eugenia Rawls Courtyard Theatre - proscenium theater with optional thrust stage
- 200-seat Recital Hall
- Fully wheelchair accessible production facilities, including catwalks
- Assisted Listening System available in all venues
- Wireless access

College of Arts & Media Admissions Information

Admission to CU Denver is all that is required to start in many of the College of Arts & Media degree programs, with the exception of those listed below.

- Music & Entertainment Industry Studies (MEIS): In addition to being admitted to CU Denver, applicants to one of the audition track programs in the *Music and Entertainment Industry Studies (MEIS)* Department must complete additional music application requirements. Please review the music section on the How to Apply webpage (https://artsandmedia.ucdenver.edu/prospective-students/how-to-apply/) for complete information about the audition/application process for audition track program applicants. Applicants to the MEIS non-audition track programs do not have to audition or complete any additional requirements.
- Film & Television: The Film and Television Department requires that applicants complete a secondary Film & Television application in addition to being admitted to CU Denver. Please review the film section on the How to Apply webpage (https://artsandmedia.ucdenver.edu/prospective-students/how-to-apply/) for complete information about the secondary application for Film & Television program applicants.

Students wishing to pursue a CAM degree must be admitted to the University of Colorado Denver. See the Office of Admissions (https://www.ucdenver.edu/admissions/) website for application requirements and deadlines. In addition, all audition track emphases in Music & Entertainment Industry Studies, and the Film & Television program require additional application components. Students typically submit these additional components at the same time as university applications. Certain Visual Arts require portfolio-reviews after students have completed initial course work at CU Denver. Find more details about CAM program application requirements and deadlines in this catalog by selecting the above program links. Music and Film & Television application guidelines and deadlines may also be found on the CAM Admissions website (https://artsandmedia.ucdenver.edu/).

(For Graduate Programs and information please refer to the Graduate **(**http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-arts-media/#departmentstext**) catalog or contact** CAM@ucdenver.edu**.)**

College of Arts & Media (CAM) Departments and Programs

- Film & Television (p. 215)
  - Film & Television Emphasis, BFA (p. 220)
  - Film & Television Performance Minor (p. 221)
  - Film & Television Production Minor (p. 222)
  - Film & Television Writing Minor (p. 223)
  - Theatre, Film & Television Minor (p. 224)
- Music & Entertainment Industry Studies (p. 225)
  - General Music Minor (p. 249)
  - Music Business Emphasis, Audition Track, Music BS (p. 250)
  - Music Business Emphasis, Non-Audition Track, Music BS (p. 252)
  - Music Industry Studies Minor (p. 253)
  - Performance Emphasis, Music BS (p. 254)
  - Recording Arts Emphasis, Audition Track, Music BS (p. 256)
  - Recording Arts Emphasis, Non-Audition Track, Music BS (p. 258)
  - Singer/Songwriter Emphasis, Music BS (p. 259)
  - Songwriter Entrepreneur Emphasis, Audition Track, Music BS (p. 261)
- Visual Arts (p. 263)
  - 3D Graphics and Animation Emphasis, BFA (p. 278)
  - Art History Minor (p. 280)
  - Art History, Fine Arts BA (p. 281)
  - Art Practices Emphasis, BFA (p. 282)
  - Art Practices Minor (p. 284)
  - Digital Design Emphasis, BFA (p. 285)
  - Digital Design Minor (p. 287)
  - Illustration Emphasis, BFA (p. 288)
  - Illustration Minor (p. 290)
  - Photography Emphasis, BFA (p. 291)
  - Photography Minor (p. 292)

College of Arts & Media Graduation Requirements

Important Note:

In addition to the requirements listed below, College of Arts & Media (CAM) students must complete requirements listed on the CU Denver Core Curriculum (p. 122) page and also General Graduation Requirements listed on the Graduation (p. 126) page in this catalog.

Grade and GPA Requirements

- A cumulative GPA of 2.0 is required in all University of Colorado course work
- A minimum of C (2.0) is required for each course applied toward a CAM major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of P is acceptable for courses in which the only grade available is Pass or Fail.

Upper Division

For BA and BFA degrees, a minimum of 45 semester hours of upper division (3000/4000-level) course work is required.

Residency Requirement

A minimum of 30 semester hours of resident credit is required.

CAM General Course Requirements

Non-Major Arts

All CAM undergraduates must complete at least one course in the arts outside of their major area. Specifically:

- **Music majors** must take three semester hours in theater, film and/or visual arts
- **Visual arts majors** must take three semester hours in film & television and/or music
- **Film and television majors** must take three semester hours in visual arts and/or music

Students may mix and match disciplines to reach 3 semester hours, or they may take a 3-semester hour course in one discipline.

Note: The course selected to fulfill Non-Major Arts cannot also fulfill a category of the CU Denver Core.

Foreign Language

For BA degree (Art History) students must complete the foreign language requirement using one of the options below:

- Completion of a 2nd year (Level II) high school course with a minimum grade of C- (1.7) in the final semester.
- Completion of a 2nd semester (Level II) college-level course with a minimum grade of C- (1.7). May not be taken pass/fail. A "conversation" course is not acceptable. This option may involve taking up to 10 semester hours.
- Demonstration of college-level second semester proficiency by exam. Contact the CU Denver Department of Modern Languages at 303-315-7234 for details.

For BFA degrees in Film and Television students must complete the foreign language requirement using one of the options below:

- Take a second course from the approved list for Core category: International Perspectives (recommended to be taken at the upper division (3000/4000) level)
- Take any level foreign language course

For BFA degrees in Fine Arts and the BS in Music, foreign language is not included as a requirement.

General Electives

CAM undergraduates may need to complete general elective courses to meet minimum credit requirements described in the General Graduation Requirements (p. 126).

Majors

All CAM students must be admitted to a major and an emphasis within that major. Students must complete all major requirements to graduate. Links to information about specific majors and emphases, including any required reviews/assessments for admission, may be found on the Programs (p. 1289) page in this catalog.

Minors

Departments in the college have developed a variety of minors. A maximum of six non-CU Denver semester hours can be used toward each CAM minor. In addition, students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Students are not required to have a minor to graduate. Students may choose to declare a minor in CAM or in another college/school in the university. Links to information about specific minors, including any required reviews/assessments for admission, may be found on the Programs (p. 1289) page in this catalog.

More than 120 semester hours may be required to complete both a major and minor.

Certificates

Departments in the college are working to develop a variety of certificates. In general, all credits toward a CAM certificate must be completed at CU Denver.

Students are not required to have a certificate to graduate. Students may choose to declare a certificate in CAM or in another college/school in the university. Links to information about specific certificates, including any required reviews/assessments for admission, may be found on the Programs (p. 1289) page in this catalog.

More than 120 semester hours may be required to complete both a major and a certificate.

Double Emphases

Students may graduate with more than one emphasis within the same CAM major by completing all requirements for each emphasis (e.g., BFA in Fine Arts with double emphases in digital design and photography). Completing these requirements will likely require more than 120 semester hours.

Double Majors

Students may graduate with more than one major in CAM by completing all requirements for each major within a single degree (e.g., a BFA with

a major in fine arts, photography emphasis **and** a second major in film & television). Completing these requirements will likely require more than 120 semester hours. Double majors apply to students completing two majors from different CAM departments.

Double Degrees

Students may earn two degrees in the College of Arts & Media (e.g., BFA in Film & Television and BA in Fine Arts) or from two different schools or colleges in the university (e.g., BS in Music and a BS in Physics) simultaneously by fulfilling all requirements for both degrees. Students must complete a minimum of 120 semester hours applied toward the two degrees, and likely more will be needed to fulfill all requirements.

Second Degrees

Students who have been awarded a bachelor's degree from CAM may be granted a second bachelor's degree provided that

1. all general requirements for the second degree have been met;
2. the degree plan for the second bachelor's degree is different from the first (for example, a student cannot twice complete a BFA in Fine Arts with an emphasis in photography); and
3. the college and major department residence requirements are satisfied.

A second degree from CAM requires a minimum of 30 additional semester hours.

Selection of Catalog for Degree Requirements

Students who switch majors (e.g., BS in Music to BFA in Film & Television) are required to complete the major curriculum in place when they declare their new degree or major. Students who switch degrees within the same major (e.g., BFA in Fine Arts to BA in Fine Arts) will be required to complete the degree curriculum that is in place when they declare their new degree. Students who switch emphases within a degree and major will be required to complete the emphasis curriculum that is in place when they are accepted into the new emphasis.

Due to the dynamic nature of the College of Arts & Media programs, returning students who have not attended in more than five years must complete their programs based on the current curriculum and policies.

Applying for Graduation

Students are encouraged to meet with a College of Arts & Media advisor the semester before they intend to graduate to review graduation procedures and degree requirements. Students who have not attended the university for one calendar year (three consecutive semesters, including summer term) or longer must gain readmission to the university prior to applying for graduation. It is the student's responsibility to apply with enough time for the readmission process to be finalized by the census date.

Academic Honors

Latin Academic Honors

Latin academic honors are awarded at the time of graduation, based on cumulative University of Colorado undergraduate GPA. To be eligible for honors, a College of Arts & Media (CAM) student must have completed a minimum of 30 semester hours at the University of Colorado (on any CU campus). A cumulative CU GPA of 3.650-3.749 earns cum laude, a 3.750-3.849 earns magna cum laude and 3.850 or above earns the summa cum laude honors designation on a degree.

Outstanding Graduates

CAM recognizes "outstanding graduates" each fall and spring term. Students are nominated by CAM faculty and final selections are determined by the CAM Executive Committee.

Criteria for Outstanding Graduates:

- Cumulative University of Colorado GPA of 3.500 or higher
- Graduating senior in the semester the award is given
- Active member of CAM student club(s)
- Participant in production programs of the student's department
  - E.g., art exhibits, record productions, audio engineering
- Participant in outreach programs for the department and/or college
- Leadership qualities in the classroom
- Growth, development and demonstration of excellence as a practicing artist or scholar
- Active citizenship in the department, college, university and/or community
- Superior academic achievement

Petitioning for Exceptions to Standing Academic Policy

Students are required to complete the College of Arts & Media (CAM) general course requirements (including Core requirements) that were in effect when they began as degree-seeking students at CU Denver, and major requirements as outlined when they declared their degree, major and emphasis and were admitted to the program. If a program revises its curriculum, students have the option of following their original degree requirements or the revised curriculum. Courses under the original requirements may no longer be taught or may not be available for a set duration. In this case, the department faculty will approve reasonable course substitutions.

Course substitutions in the major or minor must be approved by the designated program director in the specific program area, the department chair and/or possibly the associate dean. Course substitutions in the CAM Core requirements must be approved by the university Core Curriculum Oversight Committee through a petition process. Please contact CAMadvising@ucdenver.edu for additional information.

The CAM Academic Policies, Procedures and Curriculum Committee is the appellate committee for all student-related academic petitions, issues and appeals. The committee is responsible for the evaluation and interpretation of the approved academic policies of the college. Questions about interpretations of policies may be directed to CAM Advising and Student Services. Procedures and petition guidelines are available at the CAM website or by emailing CAMadvising@ucdenver.edu.

College of Arts & Media Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

Undergraduates Taking Graduate Coursework

College of Arts & Media undergraduate students are not typically permitted to take courses at the graduate level. Undergraduates interested in taking graduate-level courses should consult with the instructor and the department, as well as with their academic advisor.

Independent Study

The College of Arts & Media (CAM) has independent study policies that determine eligibility, registration and how independent study credits may apply toward bachelor's degrees. Students should consult a CAM advisor, program director, or Department chair for specific eligibility criteria and registration procedures. The number of semester hours (1, 2, or 3) to be earned for an independent study project shall be determined at the time of registration. A maximum of 12 semester hours of independent study may apply toward the bachelor's degree and cannot be used to replace existing and available courses. Enrolling in an independent study course requires dean's/advising office approval and is not guaranteed. Please contact CAMadvising@ucdenver.edu for additional information and appropriate paperwork. Independent study should be added by the census date (add/drop deadline) as noted on the academic calendar.

Internships

Internships provide important educational and professional experience. A maximum of 3 semester hours of internship credit per semester and 9 semester hours overall is allowed. Internship credit may not be awarded retroactively or after the student begins internship hours. Students should consult with an academic advisor about the counting of internship credits in their degree plans.

The college requires that students have the following to qualify for an internship:

- 60 completed semester hours
- Minimum of a 2.75 cumulative University of Colorado GPA

Specific academic programs may have additional eligibility requirements for an internship. Students seeking an internship should consult with the college's Office of Advising and Student Services and the Experiential Learning Center. Additional information is available by contacting CAMadvising@ucdenver.edu. Occasionally opportunities arise mid-semester; in such cases, students must file a Special Processing Form to add the course and, depending on the date, may be required to petition the associate dean for approval to add an internship.

Declaring a Major or Minor

All undergraduate degrees offered through the College of Arts & Media (CAM) comprise 120 semester hours. Students must declare a major to graduate. Minors are optional.

All CAM majors require students to select a degree plan (BA, BS or BFA) and an emphasis. Links to information about specific majors, emphases and minors, including any required reviews/assessments for admission, may be found on the Programs (p. 1289) page in this catalog. If an emphasis or minor does not require review/assessment for admission, CAM students in good academic standing may contact their CAM advisor.

Students may choose to pursue a double degree, double major, double emphasis or minor. Each of these options may require more than 120 semester hours to graduate. Please contact CAM@ucdenver.edu for additional information.

Changing a Major or Minor

Undergraduate students who wish to transfer from one emphasis or minor to another within CAM must currently be in good academic standing, pass appropriate reviews/assessments, as outlined in the program pages of this catalog, and notify CAM in Arts 177 by submitting a change of major or a change of minor form. Students who want to transfer to the College of Arts & Media (CAM) from another college or school within the university must formally apply for an intra-university transfer (IUT) and pass any appropriate reviews/assessments as outlined in the program pages of this catalog. To be considered for admission, students must have a minimum 2.000 cumulative University of Colorado GPA. To apply for an intra-university transfer, students must submit an intra-university transfer (IUT) form to the College of Arts & Media undergraduate advisor. Intra-university transfer forms are available at the Office of Registrar or from a CAM advisor. Additional information about IUTs can be found here (p. 68).

Proficiency Testing

Degree students may take examinations for credit. To qualify for an examination, the student must be formally working toward a degree at CU Denver, have a GPA of at least 2.000 and be currently registered. Contact the registrar's office for instructions. A nonrefundable fee is charged. Students should contact their degree advising office to determine whether the credit will apply to their degree.

Students with sufficient experience and knowledge may contact CAMadvising@ucdenver.edu to discuss testing out of required course work. The College of Arts & Media does not waive credits or requirements; thus, if students successfully demonstrate mastery of the material (as determined by the appropriate faculty), they will be advised into substitute courses.

Holds

Periodically, students may find a hold placed on their registration by the Office of Advising and Student Services, requiring them to meet with a College of Arts & Media (CAM) advisor prior to registering. Students can view registration holds in the UCDAccess portal. As other offices may also place a hold on a student's registration, students are encouraged to resolve any registration holds through the appropriate offices prior to their registration date/time.

All incoming CAM students will be flagged with advising holds which require a meeting with an academic advisor prior to registering for their first semester of courses. New first-year students are also required to attend New Student Orientation, and transfer students may be required to participate in an orientation as well.

Students on academic probation will have a hold placed on their registration and be required to connect with an academic advisor each semester in order to add classes. Consult the Academic Standing (p. 109) page in this catalog for details.

Adding a Course

College of Arts & Media (CAM) policy states that students who miss the first two class sessions of any CAM course can be administratively dropped. Likewise, students may not be permitted to add any CAM course if they have missed the first two class sessions.

Course Credit Limitations

Up to 8 semester hours of activity courses in physical education will count toward the 120 hours required for the degree.

Adding a Course After Census

Students wishing to add a full-term course after census must file a Late Add Petition with the college for review and consideration. Contact CAMadvising@ucdenver.edu for petition guidelines.

Administrative Drop Policy

Students who miss the first two class sessions of a College of Arts & Media course can be administratively dropped. Students who never attend class should not assume that they will be automatically dropped from the course. The student is responsible for dropping courses by published deadlines. Failure to do so will result in a charge of tuition and/or fees for the class and a final grade of "F".

Retroactive Drop/Withdrawal

After the completion of a semester, students wishing to attempt to withdraw from one or more courses in that semester must file a petition for retroactive action with the College of Arts & Media. Petitions should include documentation of circumstances that were beyond the student's control and that impacted the grade(s) and the student's ability to withdraw from the course(s) before the end of the semester. Petitions should be submitted within one year of the end of the original semester. Contact CAMadvising@ucdenver.edu for petition guidelines. If the petition is approved, the course(s) and grade(s) of W will appear on the transcript; students remain responsible for all tuition and fees associated with the course(s).

Grade Appeals

For College of Arts & Media courses:

- When a student has questions or concerns regarding academic issues such as project grades, final grades, attendance policies, etc., the student is encouraged to speak directly with the faculty member teaching the course.
- If resolution or clarity of understanding is not reached, the following procedure should be followed:
  - The student contacts the chair of the department offering the course to discuss the concerns and their point of view.
  - The department chair speaks with the faculty member to ascertain the faculty member's point of view.
  - The department chair facilitates a meeting between the student and faculty member to discuss the issue.
  - If the student still has concerns after completion of these procedures, the student should contact the College of Arts & Media associate dean of academic and student affairs.

For non-CAM courses, students should consult the school/college offering the course.

Special Grading Options

A minimum grade of C (2.000) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.700) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable **only** for courses in which the grading basis is S/U.

Courses taken to fulfill major/minor/ certificate requirements, Core English Composition, Core Mathematics, and the foreign language requirement may not be taken P+/P/F or S/U (unless the course is only offered on a S/U basis).

If the institution offers modified grading options, CAM faculty may vote to allow these options for CAM courses on a term-by-term basis. Consult a CAM advisor for details.

No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

No Credit

A minimum grade of C (2.000) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.700) or lower will not fulfill a major, minor or certificate requirement. Therefore, students are not permitted to take these courses for no credit.

Incomplete Grades

The College of Arts & Media (CAM) has strict policies for granting incomplete grades. They include but are not limited to the following:

- Reason for incomplete must be a verifiable circumstance beyond the student's control that made completion of the course impossible. The student must provide documentation.
- The majority of course requirements (75 percent) must have been completed with a passing grade to be eligible for an incomplete (C (2.000) for major/minor/certificate courses; C- (1.700) for select general education courses; D- (0.700) for most general education and general elective courses).
  - Whether the student has successfully completed 75% of the course with a passing grade is determined by the instructor and based on the requirements listed in the syllabus.
- CAM course completion agreement must be signed by both the instructor and student, with final approval by the dean's/advising office.
- All course work must be completed within one calendar year of the end of the original course, unless an earlier deadline is specified.
- Requests for a retroactive change from a letter grade to an incomplete will not be considered.

The student is responsible for requesting an incomplete grade and submitting all of the appropriate paperwork and obtaining approvals. Please contact CAMadvising@ucdenver.edu for additional information.

Attendance Policy

Students are required to attend classes, including online classes, on a regular basis. Absences must be arranged with the instructor and must conform to university and instructor policies on attendance.

College of Arts & Media (CAM) policy states that students who miss the first two class sessions of any CAM course can be administratively

dropped. Likewise, students may not be permitted to add any CAM course if they have missed the first two classes. Students should check with their instructor if they have any questions about their status in the course.

Course Repeat Policy

Students may re-register for any course. Both (all) courses remain on the transcript and both (all) grades are used to calculate the student's GPA. Certain courses may be eligible for grade forgiveness, wherein students may retake a course in which they earned a grade below C- to improve their cumulative GPAs. Students should consult the Grade Forgiveness website (https://www.ucdenver.edu/student/advising/undergraduate/grade-forgiveness (https://www.ucdenver.edu/student/advising/undergraduate/grade-forgiveness/)) for complete information. Some types of courses (e.g. Internships, Independent Studies, etc.) may be repeatable for applicable credit within a certain range of total semester hours. Special Topics and/or other departmental courses may also be repeatable for applicable credit within a certain range of total semester hours, per departmental/program policy. Consult a College of Arts & Media (CAM) advisor for details.

A minimum grade of C (2.000) is required for each course applied toward a CAM major, minor or certificate requirement. These courses/requirements must be repeated if the student earns a final grade of C- (1.700) or lower. A grade of P is acceptable for major, minor or certificate courses in which the only grade available is Pass or Fail.

Film & Television

Chair: David Liban
Office: King Center, 506
Telephone: 303-315-7414

Overview

The Department of Film & Television offers a Bachelor of Fine Arts (BFA) in Film and Television, as well as minors in film and television production, film and television writing, film and television performance, and theatre, film and television. The department offers courses in these disciplines through an innovative curriculum in the context of a strategically designed liberal arts education.

Students have the opportunity to work directly with faculty, guest artists and fellow students through participation in the department's production program of films, television shows and web-based media projects, as well as a variety of student-produced projects. Denver-area film organizations, film screenings, lectures, concerts, exhibits and other cultural resources are regularly utilized throughout each student's course of study.

The Department of Film & Television also offers several internship opportunities including Hollywood Internships, Denver Industry Pathways, and a study abroad program in Bollywood, India.

Programs

- Film & Television Emphasis, BFA (p. 220)
- Film & Television Performance Minor (p. 221)
- Film & Television Production Minor (p. 222)
- Film & Television Writing Minor (p. 223)
- Theatre, Film & Television Minor (p. 224)

Faculty

Associate Professors:

David Liban, MFA, Brooklyn College
Hans Rosenwinkel, MFA, American Film Institute
Nate Thompson, MFA, North Carolina School of Arts

Assistant Professors:

Eric Jewett, BA Harvard University
Edward Tyndall, MFA, University of North Carolina at Greensboro

Instructors:

Andrew Bateman, MFA, Temple University
James Phelan

Professor Emeritus:

Howie Movshovitz, PhD, University of Colorado Boulder

Film and Television (FITV)

FITV 1001 - Fundamentals of Film and Television (3 Credits)
Provides fundamentals in academic theories surrounding visual culture. Topics include representation, spectatorship, mass media and popular culture, new media, and scientific images. Student participation is through discussion, creative projects, reading, and written response. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall, Spring.

FITV 1005 - Introduction to Theatre & Arts in the Community (3 Credits)
Discussion, workshops, and lectures designed to discover, analyze, and evaluate all aspects of the theatre experience: writing, acting, directing, staging, history, theory and its relationship to film & video. Attending plays and field trips to several Denver-area theaters, and demonstrations. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts; GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression.

FITV 1035 - Introduction to Filmmaking (3 Credits)
Students will be introduced to the concepts and practices of filmmaking. Through a series of hands-on exercises students will gain experience production management, cinematography, editing and client/director relationships. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to non-College of Arts and Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA

FITV 1040 - Lighting, Grip, and Sound Introductory Workshop (3 Credits)
The purpose of this course is to acquire basic competence with all film/video production equipment. The course acts as an introductory look at maintaining professionalism, efficiency, and safety in film/video sets for cast and crew. Restriction: Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media.

FITV 1050 - Production I Basics of Film and Television (3 Credits)
Learn the fundamentals of video production including idea creation, videography, composing a professional image, cinematic lighting, sound track recording and construction, non-linear software. Individual and collaborative productions for film, video, and TV will be created. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors & FTPM minors (production) within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors FTPM minors (production) within the College of Arts Media.

FITV 1110 - Production Design: Theatre, Film and Video (3 Credits)
This design research class explores the creative skills, technical knowledge and scholarly engagement employed by production designers. The students will understand how design elements enhance a production and create a production design for a video, film or play. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 1115 - Horror in Western Culture and Cinema (3 Credits)
This course is designed to analyze the history, practice and production of the horror film. By examining the horror genre students analyze how cinema is both a reflection of the time it was produced as well as it impacts on art and society. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

FITV 1120 - Contemporary World Cinema (3 Credits)
This course will examine representative examples of films from around the world to understand the current interest and concerns of world cinema, as well as discern what concerns various countries around the world, and how those concerns are expressed. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FITV 1200 - The Culture of Television (3 Credits)
The course will combine viewing of television programs with reading, writing and discussing television as students begin to understand intellectually, and learn to take an analytical view of this remarkable phenomenon. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FITV 1550 - Scriptwriting 1 - Fiction (3 Credits)
Critical exploration of dramatic writing for stage and screen. Understand how imagery, character, story, narrative structure, literary conventions, and more, impact compelling writing. Utilize effective writing and critiquing strategies focused on drafting and writing an original film/TV script. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media with the subplan FIT. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media.
Typically Offered: Fall, Spring.

FITV 1551 - Scriptwriting for Non-Majors (3 Credits)
Critical exploration of dramatic writing for stage and screen. Understand how imagery, character, story, narrative structure, literary conventions, and more, impact compelling writing. Utilize effective writing and critiquing strategies focused on drafting and writing an original film/TV script. Max hours: 3 Credits.
Grading Basis: Letter Grade

FITV 1600 - Writing Short Film:Non Fiction (3 Credits)
Students study basic writing elements such as idea generation, character building, and scene setting while writing short non-fiction screenplays or teleplays for production. Prereq: TFTV-BFA: FITV 1550. Prereq: FTWM minor: no pre-req. Restriction: Restricted to TFTV-BFA majors & FTWM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 1550 Prereq: FTWM minor: no pre-req Restriction: Restricted to TFTV-BFA majors FTWM minors within the College of Arts and Media.

FITV 2040 - Editing and Post Production Techniques (3 Credits)
This course introduces the art of editing and post-production for film and television practices. Students will use various software applications; Adobe Premiere, Adobe After Effects and Photoshop as the platform to explore the fundamentals of visual storytelling, graphics, visual effects, compositing, color correction, compression concepts, input, output and software integration, and how that work can be integrated into varying film and television projects. Prereq: TFTV-BFA: FITV 1001. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 1001 Prereq: FTPM minor: FITV 1050 or FITV 1035

FITV 2050 - Production II Film and Television Techniques (3 Credits)
Through a series of assigned film and TV projects students will be introduced to various genres of filmmaking, while building upon the skills of preproduction, production, and post-production. Prereq: BFA: FITV 1050. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 1050 Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Spring.

FITV 2055 - Documentary Production (3 Credits)
Students produce non-fiction film/TV productions in collaboration with non-profit organizations while exploring and experiencing industry practices. Prereq: FITV 1050 + FITV 2090. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1050 + FITV 2090 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 2090 - Producing for Film and Television (3 Credits)
Students will learn the various aspects of planning, scheduling, budgeting, and managing both television and film productions. Students will develop skills for conceptualizing projects from script to screen. Prereq: FITV 1550. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1550 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 2220 - Acting for Film and Television (3 Credits)
Provides the study, skill development and workshop experience for the actor in various media — including film, television, commercial, and voice-over work. Students do physical exercises, vocal training, develop vocabulary, and scene exercises. Prereq: BFA : FITV 1050 + FITV 1550. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors, FTPM minors, and FIPR minors in the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors, FTPM minors, and FIPR minors in the College of Arts and Media. Prereq: BFA : FITV 1050 + FITV 1550 Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Fall.

FITV 2221 - Acting for Non-Majors (3 Credits)
Introduction to performance for film, TV and commercials. Students do psychical exercises, vocal training, develop vocabulary, and scene exercises. Restriction: Restricted to non-College of Arts & Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to non-College of Arts and Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA

FITV 2650 - Sound for Film and TV (3 Credits)
Building upon basic understandings of audio for film and television techniques, students will get intermediate instruction and experience with field audio recording and audio post-production practices. Students will work with digital audio editing software to gain knowledge and skills in sweetening, mixing, and sound design. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 2670 - Cinematography (3 Credits)
Students create film and TV projects that exhibit effective use of light, composition, depth of field, focal length. Student directors will learn how to collaborate with cinematographers and understand the science of photography, lenses, and lighting. Prereq: FITV 2040 + FITV 1050. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040 + FITV 1050 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Spring.

FITV 3040 - TV Studio Production (3 Credits)
Working in a multi-camera television studio environment, students in this course will experience each aspect of creating multiple live-to-tape television programs. Students will work in teams to create a television pilot as well as individual projects. Prereq: BFA: FITV 3050 + FITV 3500. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 3050 + FITV 3500
Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Spring.

FITV 3050 - Junior Project Production (3 Credits)
Students will refine their knowledge of single-camera film and TV techniques in this hands-on, collaborative course. Students will conceptualize, develop, and shoot a short film or television project throughout the semester. Emphasis on storytelling, production design, production management, and cinematography. Prereq: FITV 2050 + FITV 1200 + FITV 2670 + FITV 2650. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2050 + FITV 1200 + FITV 2670 + FITV 2650 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 3060 - Junior Project Post Production (3 Credits)
Students will apply post-production skills learned in previous courses to edit projects produced in Prod 3/Jr Project. This course will emphasize the completion of a professional broadcast-quality production with full audio and visual sweetening. Students will attain advanced editing skills through a longer format project. Prereq: FITV 3050 + FITV 3500. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3050 + FITV 3500 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 3090 - Producing Episodic Television (3 Credits)
Students explore and develop skills in the collective practices necessary for the full production of an episodic television series. Students will actively participate in various aspects of episodic television production including preproduction, production, and post-production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3050/FILM 3270 and FITV 3500/FILM 4500 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 3200 - History of Cinematic Arts I (3 Credits)
The development of cinema in the early 1880s brought with it a wealth of techniques still used today, from the close-up to crosscutting and montage. In this course students will view, analyze, research, and critique the beauty and sophistication of silent film from its beginnings through the late 1930s. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FITV 3220 - Advanced Acting Workshop for Film and Television (3 Credits)
Students will further explore techniques and practices in the performing for film and television projects. This is an intense workshop designed to better prepare students to perform for a variety of on-camera projects. Prereq: FITV 2220 or FITV 2221. Restriction: Restricted to TFTV-BFA majors or FIPR Minors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2220 or FITV 2221 Restriction: Restricted to TFTV-BFA majors and FIPR Minors within the College of Arts Media

FITV 3264 - Advanced Digital Effects (3 Credits)
Students will study software and create projects with advanced visual effects. With industry standard techniques in animation, applying compositing, image acquisition and motion graphics. Students will create a variety of projects by the end of the semester. Prereq: FITV 2040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040

FITV 3300 - History of Cinematic Arts II (3 Credits)
Take a journey through the many genres of film, from the introduction of sound to the present. Students will trace the development of various Hollywood genres and examine films that represent major developments in American cinema. In this course students will view, analyze, research, and critique films from 1938 to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FITV 3350 - Editing Aesthetics (3 Credits)
A historical, theoretical, and practical hands-on approach to deconstructing and utilizing editing aesthetics. Students will consider the theory behind editing strategies that elicit an emotional or response from viewers, and put those theories to practice through demonstrative production exercises as well as analytical writing. Prereq: FITV 2050. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2050

FITV 3500 - Writing for Episodic Television (3 Credits)
Explores the constructive and critical process of writing prime-time dramatic television and alternative broadcast platforms. Each student is guided through a series of viewings, readings, and writing exercises culminating with the written completion of television episodes for an original series. Prereq: TFTV-BFA FITV 1200 + FITV 2050. Prereq: FTWM minor. FITV 1551 Restriction: Restricted to TFTV-BFA majors and FTWM minors in the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA FITV 1200 + FITV 2050 Prereq: FTWM minor. FITV 1551 Restriction: Restricted to TFTV-BFA majors and FTWM minors in the College of Arts Media

FITV 3510 - Writing the Thesis (3 Credits)
Critical exploration of dramatic writing for the screen with a focus on advanced short narrative screenplays. The course serves as a precursor to the FITV thesis project. Students will utilize intensive workshop and writing techniques to develop original screenplays in preparation for the Department of Film and Television's senior thesis course. Prereq: TFTV-BFA and FTWM minor. FITV 3500. Prereq: Non-TFTV-BFA Majors and Non-FTWM minors must have taken any two of ENGL 3415, ENGL 3417, ENGL 2390 or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA and FTWM minor. FITV 3500 Prereq: Non-TFTV-BFA majors or non-FTWM minors must have taken any two of ENGL 3415, ENGL 3417, ENGL 2390

FITV 3520 - Advanced Screenwriting (3 Credits)
Critical exploration of advanced screenwriting techniques with a focus on mastering sequence structure for longform projects. Students will utilize intensive workshop and writing strategies to develop original content and a fundamental understanding of industry workflows. Students will read, analyze and discuss works-in-progress by all workshop participants and present their work for peer review. Topics related to working as a professional writer will also be explored. Prereq: FITV 1550 and FITV 1600. Restriction: Restricted to TFTV-BFA majors and FTWM minors, and by instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1550 and FITV 1600. Restriction: Restricted to TFTV-BFA majors and FTWM minors..

FITV 3550 - World Theatre (3 Credits)
Discussion, workshops and lectures designed to discover, analyze and evaluate the world theatre experience from countries outside of the United States. The course will explore theatre and its precedents in Asia, Africa, Eastern Europe and Latin America. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FITV 3570 - Directing for Film and Television (3 Credits)
Through a series of assigned video projects, students will practice the art of directing several film and television projects. Applying communication skills and directing techniques to the process. Prereq: TFTV-BFA: FITV 2220 or FITV 2221 + FITV 2050. Restriction: Restricted to TFTV-BFA majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 2220 or FITV 2221 + FITV 2050. Restriction: Restricted to TFTV-BFA majors.

FITV 3600 - Denver Film Festival (3 Credits)
Students in this course will know how to contextualize films in terms of content and form. Through film viewing, written assignments, and critical analysis students learn to describe, classify and appreciate narrative, craft and artistic intent. Max hours: 3 Credits.
Grading Basis: Letter Grade

FITV 3611 - Drama of Diversity (3 Credits)
Investigates the creation and reinforcement of gender, ethnic, and racial stereotypes in theatre, film, and television in the United States. The course explores how popular images are created by writers, directors, and performers, and become "reality" for the audiences for which they are intended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

FITV 3620 - Business of Film (3 Credits)
This course is designed to provide FITV students with a systematic overview of the modern day filmed entertainment business. The analysis will not only cover the traditional "Hollywood System" operating out of Los Angeles but will examine the independent film model as well. This course will take a critical look at the financing, production, marketing, and distribution of filmed entertainment with particular attention paid to both the financing models at a range of budgetary levels and the various revenue streams inherent in the exploitation of such product, in both the domestic marketplace and international arena. Prereq: FITV students must have completed FITV 2090; MEIS students must have completed MUSC 2700 OR MUSC 2750. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV students must have completed FITV 2090; MEIS students must have completed MUSC 2700 OR MUSC 2750.
Typically Offered: Fall, Spring.

FITV 3770 - Advanced Production Design for Film and Television (3 Credits)
Students with further explore design elements found in film and television, and utilize class projects in conjunction with other student film projects. Prereq: THTR 1110 or FITV 1110. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: THTR 1110 or FITV 1110 Restriction: Restricted to TFTV-BFA majors within the College of Arts Media
Typically Offered: Fall.

FITV 4000 - Senior Thesis Production (3 Credits)
The first course of a two-part capstone experience in which students collaborate, plan, cast, budget, and produce a professional quality film/TV project or script. Projects/scripts will be completed in FITV 4010. Prereq: FITV 3040 + FITV 3050 or FITV 3090 + FITV 3200. Restriction: Restricted to TFTV-BFA majors within in the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3040 + FITV 3050 or FITV 3090 + FITV 3200 Restriction: Restricted to TFTV-BFA majors within in the College of Arts and Media
Typically Offered: Fall.

FITV 4010 - Senior Thesis Post-Production (3 Credits)
Second course of a two-part capstone experience in which students collaborate on post-production to complete the film/TV/script project. Emphasis will be on editing, color-correcting, audio sweetening, graphics, finishing a fine-cut of their project; students will seek distribution and exhibition. Prereq: FITV 4000. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 4000 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Spring.

FITV 4020 - CAM Film Productions (3 Credits)
Under the supervision of a faculty member, this class works together as a group to create broadcast quality television projects. Projects will be designed for a PBS television market and may be aired as such. Pre-requisite: FITV 2050. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FITV 2050 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 4050 - Advanced Cinematography (3 Credits)
In this production workshop, students will analyze films and storyboards, and shoot projects created for specific action and special effects outcomes. In addition, students will examine a variety of techniques used to create action scenes in preparation for the edit. Prereq: FITV 2670. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2670 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Fall.

FITV 4200 - Advanced Acting & Directing Workshop (3 Credits)
This class will be dedicated to exploring the art and craft of developing powerful performances. We will regularly divide into groups of three (one director & two actors) so that at least two-thirds of your time will be devoted to acting. Prereq: FITV 2570 or FITV 3570. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
D-ART FITV 2570/3570+TFTV-BFA
Typically Offered: Fall.

FITV 4400 - Acting for Film and TV Practicum (3 Credits)
The practice, study and critique of acting and directing for varying film/TV projects. The class will incorporate, preparatory work, on-camera performance, directing, and an in-depth critique of the resulting work. Prereq: TFTV-BFA: FITV 3220. Restriction: TFTV-BFA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 3220. Restriction: TFTV-BFA.

FITV 4440 - Color Correction and Mastering for Film and Television (3 Credits)
This course is designed to teach students the process of color grading and film finishing techniques. This includes use of industry standard color correction software and methods of providing deliverables for film and television distribution and exhibition. Prereq: FITV 2040. Restriction: Restricted to TFTV-BFA majors and FTPM minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040. Restriction: Restricted to TFTV-BFA majors and FTPM minors.

FITV 4600 - Special Topics (3 Credits)
Specialized topics in film and video. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

FITV 4840 - Independent Study: FILM (1-3 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FITV 4939 - Internship in Film and TV (1-6 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Film & Television Emphasis, BFA

Introduction

Please click here (p. 215) to see general Film & Television information.

The Department of Film & Television offers a Bachelor of Fine Arts (BFA) in Film and Television. This BFA emphasis provides intensive and practical training that requires successful completion of numerous film/TV projects, varying in styles from fiction to documentary. The emphasis is designed so that students will progress through the semesters as a cohort group. Undergraduates will not only work on their own projects but also will assist on numerous group projects. Students will graduate with both a theoretical and historical perspective, as well as a hands-on experience in film and television production. This program prepares students to begin their careers at entry-level positions in the film or television industry, start their personal creative work, or continue their studies in a graduate program. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Students seeking this BFA emphasis should apply to the university and be accepted under the Film & Television BFA program. The Department of Film & Television strongly encourages fall admission and requires a secondary departmental application. Please contact David.Walter@ucdenver.edu for application information. Given the cohort nature of the program, students should be aware that failing to take courses in order and/or failing to earn the minimum required grade in any course may delay their graduation date.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. At least 24 of the major semester hours must be earned at CU Denver.

Code	Title	Hours
Film and Television Emphasis		
Take **all** of the following Film and Television Emphasis courses:		
FITV 1001	Fundamentals of Film and Television	3
FITV 1040	Lighting, Grip, and Sound Introductory Workshop	3
FITV 1550	Scriptwriting 1 - Fiction	3
FITV 1050	Production I Basics of Film and Television	3
FITV 1200	The Culture of Television	3
FITV 1600	Writing Short Film:Non Fiction	3
FITV 1110	Production Design: Theatre, Film and Video	3
FITV 2040	Editing and Post Production Techniques	3
FITV 2090	Producing for Film and Television	3
FITV 2220	Acting for Film and Television	3
FITV 2650	Sound for Film and TV	3
FITV 2050	Production II Film and Television Techniques	3
FITV 2055	Documentary Production	3
FITV 2670	Cinematography	3
FITV 3050	Junior Project Production	3
FITV 3570	Directing for Film and Television	3
FITV 3200	History of Cinematic Arts I	3
FITV 3500	Writing for Episodic Television	3
FITV 3300	History of Cinematic Arts II	3
FITV 3040	TV Studio Production	3
or FITV 3090	Producing Episodic Television	
FITV 4000	Senior Thesis Production	3
Film and Television Elective		
Take **nine** semester hours of upper-division Film and Television elective.		9
Total Hours		**72**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates, a list of approved electives, and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Film & Television Performance Minor

Introduction

Please click here (p. 215) to see general Film & Television Department information.

Students in this minor will receive an introductory education and practical experience in the art of on-camera performance. Through guidance from faculty, students will be instructed on methods of acting for various types of film and television projects. This will include fiction, non-fiction, voice work and understanding on how an actor works with directors, camera crews, and audio personnel. Students may also have opportunities to perform in student film productions produced within the department.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses		
Take **all** of the following:		
FITV 2220	Acting for Film and Television	3
FITV 3220	Advanced Acting Workshop for Film and Television	3
FITV 3570	Directing for Film and Television	3
FITV 4200	Advanced Acting & Directing Workshop	3
FITV 4400	Acting for Film and TV Practicum	3
Total Hours		**15**

Please contact the College of Arts & Media at CAM@ucdenver.edu for course sequencing, any prerequisite updates and for more information about this minor.

Film & Television Production Minor

Introduction

Please click here (p. 215) to see general Film & Television Department information.

This minor gives students a hands-on experience in both production and post-production, providing a foundation of basic skills and procedures in the film and television industry.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses for Production Minor		
FITV 1035	Introduction to Filmmaking	3
FITV 1040	Lighting, Grip, and Sound Introductory Workshop	3
FITV 2050	Production II Film and Television Techniques	3
Take **two** of the following Film and Television Production Minor courses:		6
FITV 2040	Editing and Post Production Techniques	
FITV 2220	Acting for Film and Television	
FITV 3040	TV Studio Production	
FITV 3350	Editing Aesthetics	
or FITV 3620	Business of Film	
Total Hours		**15**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for more information about this minor.*

Film & Television Writing Minor

Introduction

Please click here (p. 215) to see general Film & Television Department information.

Students gain writing skills (fiction and non-fiction) for the development of episodic television and film scripts. Students also learn the practices and mechanics expected of professional screenwriters.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses		
Take **one** of the following:		3
FITV 1001	Fundamentals of Film and Television	
FITV 1200	The Culture of Television	
Take **all** of the following Film and Television Writing Minor courses:		
FITV 1551	Scriptwriting for Non-Majors	3
FITV 1600	Writing Short Film:Non Fiction	3
FITV 3500	Writing for Episodic Television	3
FITV 3520	Advanced Screenwriting	3
Total Hours		**15**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for more information about this minor.*

Theatre, Film & Television Minor

Introduction

Please click here (p. 215) to see general Film & Television Department information.

In this minor, students explore theatre, film and television in both studio and lecture formats.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses for the Theatre, Film and Television Minor		
FITV 1005	Introduction to Theatre & Arts in the Community	3
FITV 1200	The Culture of Television	3
FITV 3550	World Theatre	3
Take **one** of the following courses:		3
FITV 3200	History of Cinematic Arts I	
FITV 3300	History of Cinematic Arts II	
Take **twelve** semester hours of Theatre, Film and Television Minor electives, chosen in consultation with a Film & Television faculty advisor.		12
Total Hours		**24**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for more information about this minor.*

Music & Entertainment Industry Studies

Chair: Sean McGowan (Interim)
Office: Arts Building, Suite 288
Telephone: 303-315-7450
Fax: 303-315-7489

Overview

The music program prepares students for professional careers related to commercial performance, recording, music business and the entertainment and creative industries, as well as for graduate studies at leading conservatories. More specifically, the Department of Music & Entertainment Industry Studies (MEIS) offers a Bachelor of Science (BS) in Music. Students apply to an intended emphasis and track:

- Performance Emphasis (p. 254)
- Singer/Songwriter Emphasis (p. 259)
- Songwriter/Entrepreneur Emphasis (p. 261)

Music Business Emphasis, on one of two tracks:

- Audition Track (p. 250)
- Non-Audition Track (p. 252)

Recording Arts Emphasis, on one of two tracks:

- Audition Track (p. 256)
- Non-Audition Track (p. 258)

Acceptance into MEIS is on a competitive basis with specific entrance evaluation requirements for both first year and transfer students. All applicants are placed in an enrollment pool and admission decisions are based on several factors, which include an indexed composite score of GPA and an audition (if applicable). Application materials must be received by the deadline.

Prospective students should refer to the MEIS (https://artsandmedia.ucdenver.edu/areas-of-study/music-entertainment-industry/about-music-entertainment-industry-studies/) website for current entrance requirements, deadlines and procedures.

All students in MEIS are required to abide by the policies and procedures outlined in the MEIS *Student Handbook* (available by contacting meis.dept@ucdenver.edu) as well as all university policies and codes of conduct.

Performance Emphasis

The performance emphasis (p. 254) includes specialized courses in small performance ensembles, applied private study, contemporary improvisation, and analysis and history. Students gain a diverse set of performance skills in commercial, jazz, classical and experimental music styles. The curriculum includes the presentation of junior and senior recitals. Students are required to pass a Sophomore Proficiency at the end of the sophomore year in order to progress into advanced performance and musicianship courses.

Students must pass an entrance audition to pursue the performance emphasis.

Singer/Songwriter Emphasis

Singer/songwriter track

Students in the singer/songwriter track (p. 259) complete specialized courses in the songwriting and arranging repertoire while developing their performance skills through small performance ensembles and applied private study of voice, accompanying instrument and songwriting. The curriculum includes the presentation of junior and senior recitals. Students are required to pass a Sophomore Proficiency at the end of the sophomore year in order to progress into advanced performance and musicianship courses.

Students must pass a singer/songwriter entrance audition to pursue the singer/songwriter track.

Songwriter/Entrepreneur Track

Students in the songwriter/entrepreneur (p. 261) track complete a balance of courses in songwriting and music business to develop knowledge for career prospects as independent musicians.

Students must pass a songwriter/entrepreneur entrance audition to pursue the songwriter/entrepreneur track..

Music Business Emphasis

(Audition Track (p. 250)[1] or Non-Audition Track (p. 252)[2])

The music business emphasis prepares undergraduates for careers in fields such as artist management, music publishing, concert promotion, record production, venue management, label promotion, distribution and entertainment law.

1 Audition Track (for students pursuing the music business or recording arts emphasis)
2 Non-Audition Track (for students pursuing the music business or recording arts emphasis)

Recording Arts Emphasis

(Audition Track (p. 256)[1] or Non-Audition Track (p. 258)[2])

The recording arts emphasis focuses on contemporary analog and digital technology as it is used in music recording, sound reinforcement and media applications (Internet, video games, interactive art installations, etc.). While mastering technology skills and formats, students also study the artistic and aesthetic applications of technology to recording, reinforcement, composition and performance.

1 Audition Track (for students pursuing the music business or recording arts emphasis)
2 Non-Audition Track (for students pursuing the recording arts emphasis)

Audition Track (for students pursuing the music business or recording arts emphasis)

The audition track provides an in-depth study of musicianship/performance through lectures and hands-on learning, while allowing students to specialize in their area of interest. As part of the admissions process, students must pass an entrance audition on a musical instrument or voice.

Students on the audition track must complete three semesters of music theory and ear training & sight singing courses, followed by a semester of jazz theory. In addition, students complete four semesters of class piano. All students in MEIS complete two music history courses.

Audition track students take four semesters of private lessons, culminating each semester in a performance for a jury of faculty. They also take four semesters of general recital, which culminates each semester in a performance for an audience of their peers.

Non-Audition Track (for students pursuing the music business or recording arts emphasis)

The non-audition track provides a broad overview of various musicianship/performance topics through lectures and hands-on learning. This track does not require an entrance audition.

Students on the Music Business (MB) or Recording Arts (RA) non-audition tracks complete one semester of music theory, and either two semesters of ear training & sight singing for RA, and one semester of ear training & sight singing for MB, one class piano or class guitar. Students may opt to complete up to two semesters of class piano or can switch to voice class or guitar class. Non-audition track students are required to take additional musicianship course work, including Music in Culture and a music history elective.

Non-Audition Track (for students pursuing the recording arts emphasis)

The non-audition track recording arts emphasis provides an in-depth review of recording arts topics through lectures and hands-on learning. This track does not require an entrance audition.

Students on the non-audition track complete one semester of music theory, two semesters ear training & sight singing, and class piano, guitar class, or voice class. All students in MEIS complete two music history courses.

Students are encouraged to contact the College of Arts & Media at CAM@ucdenver.edu to talk about the differences in curriculum and to determine which track is best suited to them.

See the **Graduate Catalog** or contact CAM@ucdenver.edu for information about the graduate programs in recording arts and media forensics.

Programs

- General Music Minor (p. 249)
- Music Business Emphasis, Audition Track, Music BS (p. 250)
- Music Business Emphasis, Non-Audition Track, Music BS (p. 252)
- Music Industry Studies Minor (p. 253)
- Performance Emphasis, Music BS (p. 254)
- Recording Arts Emphasis, Audition Track, Music BS (p. 256)
- Recording Arts Emphasis, Non-Audition Track, Music BS (p. 258)
- Singer/Songwriter Emphasis, Music BS (p. 259)
- Songwriter Entrepreneur Emphasis, Audition Track, Music BS (p. 261)

Faculty

Professors:

Gregory Walker, DMA, University of Colorado

Associate Professors:

David Bondelevitch, MFA, University of Southern California
Lorne Bregitzer, MS, University of Colorado Denver
Storm Gloor, MBA, West Texas A&M University
Catalin Grigoras, PhD, University Politehnica Bucharest
Erin Hackel, DMA, University of Colorado
Sean McGowan, DMA, University of Southern California
Sam McGuire, MS, University of Colorado Denver
Paul Musso, MM, University of Denver
Richard Strasser, DMA, Manhattan School of Music
Dan Hodges, MBA, DBA, Liberty University

Assistant Professors:

Cecilia Wu, PhD, University of California Santa Barbara

Assistant Professor Clinical Teaching Track:

Matt O'Brien, JD, University of Wisconsin -- Madison

Senior Instructors:

Peter Ellingson, DMA, University of Colorado
Todd Reid, MM, University of Cincinnati - Conservatory of Music

Instructors:

Gregory Garrison, DMA, University of Colorado Boulder
Andrew Guerrero, BS, University of Colorado Denver
Jeffrey Merkel, MS, University of Colorado Denver
Andrew Morell
Leslie Soich, MM, University of Colorado Boulder
Evan Shelton, MM, University of Denver

Music (MUSC)

MUSC 1011 - The Greatest Albums of All Time (3 Credits)
Explores the greatest recorded albums of the modern era. Students will gain historical perspective on specific groups and also learn about the tools and techniques used in their production process. For students who want to learn how to listen to music with greater understanding and appreciation. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 1111 - First-Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

MUSC 1540 - Introduction to Audio Production (3 Credits)
Operating principles and performance characteristics of microphones, amplifiers, speaker systems, equalizers, mixers and multi-track recorders; acoustics of music, auditoriums and recording studios. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 1541 - Audio Production I (3 Credits)
Operating principles and performance characteristics of microphones, amplifiers, speaker systems, equalizers, mixers and multi-track recorders; acoustics of music, auditoriums and recording studios. Coreq: MUSC 1542. Restriction: Restricted to MUSC-BS with a sub-plan of MRA or MST. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MUSC 1542. Restriction: Restricted to MUSC-BS with a sub-plan of MRA or MST

MUSC 1542 - Audio Production Lab (1 Credit)
Lab component to Audio Production I. Focus is on digital audio workstation fluency including recording, editing, processing, signal flow, and automation, and multitrack mixing principles. Coreq: MUSC 1541. Restriction: Restricted to MUSC-BS majors withing the College of Arts and Media. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MUSC 1541. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 1560 - Audio Production II (3 Credits)
Studies include theoretical and practical music production techniques with topics covering digital audio workstations, signal flow, digital signal processing, MIDI production, synthesis, and sampling. Team lab recording projects involve recording, mixing, and other music production techniques. Prereq: MUSC 1540 or MUSC 1541, and MUSC 1542. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1540 or MUSC 1541, and MUSC 1542. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 1800 - Acoustics for Audio Production (3 Credits)
This course studies the nature of sound and practical applications for critical listening and recording environments. Topics include the nature of sound, studio and concert hall design measurement and analysis. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2125 - Electronic Music Production Techniques (3 Credits)
Students will learn contemporary electronic music techniques using current software. The class will include MIDI sequencing, looping, sampling, FM synthesis, subtractive synthesis, and wavetable synthesis. Students will also learn how to appropriately use effects and digital editing. Prereq: MUSC 1560. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1560; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 2450 - Performing Arts Management and Presentation (3 Credits)
Introduces students to nonprofit and for-profit arts organization issues in performance presentation including organization structure, performance production and management, development of leadership and organizational skills as well as a general understanding of the profession. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2510 - Topics in Recording Arts (3 Credits)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MUSC 2550 - Critical Listening for Recording Arts (3 Credits)
Students will be trained to recognize: boosts and cuts in different bands of frequencies at increasingly small increments, types of distortion, parameters for compression, delay, reverb and stereo imaging. Students will develop a vocabulary for describing sounds and improving auditory memory. Prereqs: MUSC 1560, 1800; Coreq: MUSC 2580; Restricted to BS-MUSC MRA or MST sub-plan only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereqs: MUSC 1560, 1800; Co-req: MUSC 2580; Restricted to BS-MUSC MRA or MST sub-plan only.

MUSC 2580 - Audio Production III (3 Credits)
Advanced studies in sound recording and reinforcement, aesthetics and techniques of multi-track digital recording and stereo imaging. Team lab recording projects. Prereq: MUSC 1560, MUSC 1800; Coreq: MUSC 2550; Restricted to BS-MUSC MRA and MST sub-plans only. Cross-listed with MSRA 5550. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1560, MUSC 1800; Co-req: MUSC 2550; Restricted to BS-MUSC MRA and MST sub-plans only.

MUSC 2590 - Mastering & Advanced Digital Audio (3 Credits)
A study and practice of the art of mastering. Topics covered include: history, monitoring, signal flow, metering, jitter, audio restoration, limiting, creating a CD pre-master, & mastering for new media. Students will get practical experience mastering their own projects. Prereq: MUSC 2550 & 2580. Restriction: Restricted to MRA and MST sub-plan only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2550 2580; Restricted to MRA and MST sub-plan only.

MUSC 2600 - A History of Audio in 30 objects (3 Credits)
Explore the history of audio through the stories of 30 key objects. From Edison cylinders to Apple computers. This class will trace the development of recording technology and techniques, and discuss how they effect the way we work today. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2700 - Introduction to Music Business (3 Credits)
Introduces music as a business and a product, emphasizing music publishing, recording, broadcasting, marketing, licensing and legal aspects. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 2750 - Introduction to Music Business (3 Credits)
Introduces music as a business and product emphasizing music publishing, recording, broadcasting, marketing, licensing and legal aspects. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2815 - Music Industry Topics (3 Credits)
Various topics related to music business and recording arts industries. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MUSC 2851 - Introduction to the International Music Business (3 Credits)
Students are introduced to the fundamentals of the international music business in diverse countries, including through online discussions and research. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2852 - Introduction to International Music Technology (3 Credits)
Historical and current global innovations in music technology and their impact on popular music. From magnetic tape to DAWs, monophonic to immersive audio, Roland's 808 bass to Ableton Live. Japan, Germany, Sweden, and the UK are among those represented. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2853 - International Music Business Study Abroad (3 Credits)
Students engage in music-business field trips to international settings to attend industry events, interact with industry professionals and conduct research for a practical perspective on the increasing globalization of the music industry. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2854 - International Recording Arts Study Abroad (3 Credits)
Students become acquainted with music technology in a different country by visiting music conferences, recording studios, manufacturers, and historical landmarks. Students compare culturally-based standards and expectations of quality and communication to enhance their sense of professionalism in the field. Max hours: 3 Credits
Grading Basis: Letter Grade
Additional Information: Global Education Study Abroad.

MUSC 3125 - Sound and Music for Video Games (3 Credits)
This course will give students an overview of the function of sound and music for video games including: history, sound engines, types of audio utilized, stereo and surround sound localization, music capabilities of hardware configurations and future trends in sound for video games. Prereq: MUSC 2580. Max hours: 3 Credit.
Grading Basis: Letter Grade
Pre: MUSC 2580

MUSC 3130 - Sound and Music For Video Games II (3 Credits)
Course is a continuation of Sound and Music for Video Games. Topics of study include non-linear music composition and implementation, advanced sound design techniques, optimization, and hands-on experience with modern game engines and game audio engines. Prereq: MUSC 3125. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3125. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3210 - Music and Entertainment Marketing (3 Credits)
In this course students learn the essential elements of marketing as applied to the music and entertainment industry. Course topics include: marketing principles, theories and tools utilized in the music and entertainment businesses and specific industry practices and applications. Prereq: MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3220 - Artist Management (3 Credits)
Students learn the theory and practice of artist management as it relates to developing a career through entrepreneurship, establishing business structures for the artist, and concepts including: promotion, live performance, recording, contracts, and essential business practices. Prereq: MUSC 2700 Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3250 - Music and Entertainment Marketing (3 Credits)
Students learn the essential elements of marketing as applied to the music and entertainment industry. Course topics include: marketing principles, theories and tools utilized in the music and entertainment businesses and specific industry practices and applications. Restriction: Restricted to Music Industry Studies Minor MUIS-MIN. Prereq: MUSC 2750 or MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Industry Studies Minor MUIS-MIN. Prereq MUSC 2750 or MUSC 2700.

MUSC 3260 - Artist Management (3 Credits)
Students learn the theory and practice of artist management as it relates to developing a career through entrepreneurship, establishing business structures for the artist, and concepts including: promotion, live performance, recording, contracts, and essential business practices. Restriction: Restricted to Music Industry Studies Minor MUIS-MIN. Prereq: MUSC 2750 or MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Industry Studies Minor MUIS-MIN. Prereq MUSC 2750 or MUSC 2700.

MUSC 3265 - Music Industry Networking (3 Credits)
This course examines key networking strategies, processes and methods within the music industry. Students will research potential markets using social media, face-to-face interaction and other electronic means. Prereq: MUSC 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3220

MUSC 3505 - Introduction to Audio Post Production (3 Credits)
Reviews all aspects of audio synchronized with picture, including music, sound effects, narration, and dialog replacement. Topics studied with respect to film, video and multi-media. Cross-listed with MSRA 5505. Prereq: MUSC 2590 or FITV 2650 (Sound for Film and TV). Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590 or FITV 2650.

MUSC 3515 - History of 20th Century Film Music (3 Credits)
This survey of the history of 20th century music in film will acquaint aspiring filmmakers and musicians with a history of the music, as well as concepts of film theory and the creative use of film music. Restriction: Restricted to students with Junior or Senior status. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3530 - Live Sound Reinforcement (3 Credits)
This course focuses on the basic elements of sound reinforcement: acoustics, equalization, equipment and mixing techniques. The major emphasis is the production of the final sonic product. Prereq: MUSC 2580. Restriction: Restricted to Sophomore standing or higher and to MUSC-BS with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2580 Restriction: Restricted to Sophomore standing or higher. Restriction: Restricted to MUSC-BS with sub-plan of MRA or MST.

MUSC 3545 - Music Editing in Visual Media (3 Credits)
Music editing for film and television. Spotting notes, temp tracks, cue sheets, scoring session management, dubbing stage fixes, and Performing Rights Artists notes. Cross-listed with MSRA 5545. Prereq: MUSC 3505. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 3555 - Dialogue Editing & Mixing for Visual Media (3 Credits)
Dialogue editing and mixing for film and television. Recording Voiceover, Automated Dialogue Replacement, Group ADR, Efforts. Noise-reduction, mix levels, compression, limiting, EQ and use of reflected sound. Cross-listed with MSRA 5555. Prereq: MUSC 3505. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 3605 - Audio Post Production II (3 Credits)
Students will learn advanced Pro Tools techniques by designing, conceptualizing, and completing sound for a student film project. This interdisciplinary course prepares students for working relationships between Recording Arts, Film and Video areas and an entry level job in post production. Prereq: MUSC 3505. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5605. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3615 - Topics In Music Business (3 Credits)
Various topics relating to the study of music business. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

MUSC 3650 - Music Touring (3 Credits)
Study of the important elements related to the successful execution of musical tours. Topics include tour management, deal memos and contracts, advancing a tour, tour routing, management/booking agents, merchandise sales, tour accounting, hand tour marketing. Prereq: MUSC 3210 and MUSC 3220. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and MUSC 3220. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3690 - Concert Promotion and Venue Management (3 Credits)
This course gives students a working knowledge of touring, presenting, promoting, marketing and management of live concerts. They will undertake an in-depth analysis from various points of reference: issues for agent, independent promoter, venue manager, tour/production manager and performer. Prereq: MUSC 3210 and MUSC 3220. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and MUSC 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3699 - Concert Promotion and Venue Management (3 Credits)
This course gives students a working knowledge of touring, presenting, promoting, marketing and management of live concerts. They will undertake an in-depth analysis from various points of reference: issues for agent, independent promoter, venue manager, tour/production manager and performer. Restriction: Restricted to Music Business Minors. Prereq: MUSC 3250 and MUSC 3260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Business Minors. Prereqs: MUSC 3250 and MUSC 3260.

MUSC 3700 - Music and Entertainment Business in the Digital Age (3 Credits)
In this course students learn the trends and developments changing the industry in the Digital Age. Course focuses on current technology, terminology and business models shaping the industry, preparing students for entry into an evolving music and entertainment career.
Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3710 - CAM Records (3 Credits)
Provides students with an opportunity to use knowledge and skills from music business courses to create and execute initiatives while partnering with local artists and music-related entities for a hands-on learning experience that benefits the student and local music community. Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3715 - Music Business Modules (1 Credit)
Modular courses intended to expose students to specific business and management aspects of various subindustries within the music industry..
Prereq: MUSC 3690. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

MUSC 3720 - Law and the Music Industry (3 Credits)
Students will learn how to use and analyze music law principles through a review of essential court case studies. Students will be tested on lecture material and provided with an opportunity to complete research papers for a more in-depth examination. Prereq: MUSC 3700, 3710 and 3755. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3700, 3710 and 3755. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3730 - Introduction to Music Cities (3 Credits)
In this course, students will examine the development and enhancement of music communities, using as templates the music communities in the city of Denver, the state of Colorado, and other cities throughout the world. Restriction: Restricted to Students with a Junior or Senior Standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3731 - Non Profit Entities in Music and Creative Economies (3 Credits)
Students explore the viability, creation, effective operation, and sustainability of a music-related non-profit entity within a music community and how it can strengthen the economic and social well-being of that community. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3732 - Advanced Music Cities (3 Credits)
Students explore how investment in a city's music economy can be beneficial to the development of both a city's physical and economic landscape. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3733 - Music Tourism (3 Credits)
Students will learn how to use music to drive local and regional tourism strategies. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3740 - Location Sound Recording (3 Credits)
Studies workflow and techniques for location recording for film, video, TV, and video games. Students will work in field and in the studio recording and producing sound effects. Topics include microphone selection, field recording, editing and related industry studies. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3750 - Women in the Music Industry (3 Credits)
An exploration of the role of women in the music industry, from performers to recording professionals, managers, and executives. This course offers historical perspective on gender diversity in the industry, and explores current issues and its impact on music. Prereq: MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700.

MUSC 3755 - Music Publishing (3 Credits)
Students will learn key issues related to music publishing and song marketing activities, as well as the function and responsibilities of music publishers. Students will gain insight into skills needed to operate a music publishing company. Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3760 - Music Publishing (3 Credits)
Students will learn key issues related to music publishing and song marketing activities, as well as the function and responsibilities of music publishers. Students will gain insight into skills needed to operate a music publishing company. Restriction: Restricted to Music Business Minors. Prereq: MUSC 3250 and MUSC 3260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Business Minors. Prereqs: MUSC 3250 and MUSC 3260.

MUSC 3770 - Music Licensing (3 Credits)
An examination of licensing and publishing agreements associated with the music industry. Course will also examine digital licensing agreements from a publishing and label perspective. Prereq: MUSC 3720 and MUSC 3755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MUSC 3720 and MUSC 3755.

MUSC 3775 - Music Supervision and Synch (3 Credits)
An examination of processes and strategies associated with securing licenses for music in media outside the music industry. This course offers hands-on opportunity to make music selections for a variety of media using licensing/contract deals for composers, publishers, and labels. Prereq: Either MUSC 2700/2750 OR FITV 1001. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MSUC 2700 and MUSC 2750 OR FITV 1001.
Typically Offered: Fall, Spring.

MUSC 3785 - Current Issues In the Music Business (3 Credits)
Class discusses and analyzes cutting-edge business and legal developments in the music industry, focusing particularly on the developments' impact on historical traditions, career paths and creative applications in the field. Prereq: MUSC 3690. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 3690 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3790 - Video Production in the Arts: Music (4 Credits)
Introduces the development of the contemporary music video with an emphasis on stylistic and technical analysis. Combines a lecture demonstration format with hands-on videography. Open to music, theatre, fine arts majors, and students who have successfully completed at least one College of Arts and Media course. Max hours: 4 Credits.
Grading Basis: Letter Grade

MUSC 3845 - The Beatles (3 Credits)
This course explores the music, biography, cultural impact and business of the Beatles. Restriction: Students must be of sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3850 - History of the Music Industry (3 Credits)
This course investigates the historical development of the music industry from an economic, social, artistic, political, and technological perspective. It focuses on organizations, genres, business systems and influential individuals. Restriction: Restricted to MUSC-BS majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 4100 - Advanced Composition (2 Credits)
Composition of extended forms. May be repeated once for credit. Prereq: MUSC 3200. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

MUSC 4210 - Advanced Music Law (3 Credits)
Students will conduct in-depth research on focused music law issues, and engage in a workshop setting in drafting, reviewing and negotiating music business contracts. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MUSC 3720

MUSC 4360 - Music, Meditation and Technology (3 Credits)
Interdisciplinary course on acoustic ecology, sound art, and music technology. Through deep listening, compassionate listening, soundwalking, and interactive music controlled by motion capture, the unifying theme of this course is an engagement with sonic awareness, environment, and self-exploration. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5360. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST within the College of Arts and Media
Typically Offered: Fall.

MUSC 4380 - Advanced Electronic Music Production & Performance (3 Credits)
This course is designed to take a deeper dive into music, electronic music, as well as perceptions of music. Students will be able to create generative compositions, single sample- based compositions, a performative electronic composition, and incorporate multimedia elements into their compositions. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4400 - The International Music Business (3 Credits)
Students examine key elements of the music business structures of different countries, including the countries' trade organizations, industry executives, music artists (as examples of music business success), intellectual property principles and current music business issues. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MUSC 3720

MUSC 4500 - Topics in Professional Audio (1 Credit)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Prereq: MUSC 4550. Cross-listed with MSRA 5500. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: MUSC 4550 Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4510 - Topics in Recording Arts (3 Credits)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: MUSC 4550 Restriction: Restricted to MUSC majors with a sub-plan of MRA or MST
Typically Offered: Fall, Spring, Summer.

MUSC 4525 - Multimodal Interaction for Music (3 Credits)
This course explores human-computer interaction in music composition and performance. Students will learn to program and use open-source hardware to build novel and creative musical interfaces and instruments. Restriction: Restricted to Junior/Senior level students in the Recording Arts program. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior/Senior level students in the Recording Arts program (MUSC-BS MST or MUSC-BS MRA)

MUSC 4535 - Sound Effects & Foley for Visual Media (3 Credits)
Techniques for recording sound effects in the field and recording Foley in the studio. Use of library effects. Use of mixing techniques and plug-ins to create more complex sounds. Cross-listed with MSRA 5535. Prereq: MUSC 3505. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 4545 - Re-recording Mixing for Visual Media (3 Credits)
Techniques for mixing dialogue, ADR, music, sound effects, background ambiences and Foley. Different level standards and deliverables. Cross-listed with MSRA 5565. Prereq: MUSC 3555 or MUSC 4535. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3555 or MUSC 4535

MUSC 4575 - Surround Sound (3 Credits)
This lecture-lab course deals with surround sound in film, digital TV and DVDs. Topics include monitoring, microphone techniques, recording, mixing, mastering, delivery formats and psychoacoustics. Students work on two lab projects in the semester. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4580 - Audio Production Seminar (3 Credits)
Faculty and majors of the music engineering program assemble to discuss and demonstrate issues of artistic and technical applications of recording technology. Student projects, faculty, and guest lectures provide topical focus. (Music facility fee applies) Prereq: MUSC 3505. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: MUSC 3505; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4581 - Audio Production Seminar II (3 Credits)
A capstone project based course in which students complete professional quality projects in music production and/or post production. Students refine their engineering skills and develop new skills required for integration in the music industry such as portfolio design and resume development. Prereq: MUSC 4580. Cross-listed with MSRA 5581. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 4580 Restrction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST

MUSC 4740 - Music Business Analysis (3 Credits)
Students learn to analyze specific managerial situations unique to the music and entertainment industries and will understand aspects of finance, taxation, and management science. Prereq: MUSC 3690, 3700, 3710 and 3755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3690, 3700, 3710 and 3755 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 4800 - Music Industry Entrepreneurship (3 Credits)
MIE is a project-based course focused on individual entrepreneurial endeavors. Students will supply their own business, music, multi-media or audio projects. The class will focus on principles of entrepreneurship and helping student's develop those projects into viable businesses or creative releases. Restriction: Restricted to Juniors and Seniors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 4820 - Digital Music Techniques (3 Credits)
Studies the general principles and applications of digital music technology, emphasizing the function and operation of specific computer software. Topics include digital audio workstations, MIDI sequencers, digital signal processing programs, and distribution on optical discs and computer-based mediums. Prereq: Admittance to Recording Arts/Tech focus. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST

MUSC 4890 - Music Business Senior Seminar (3 Credits)
Seminar activities focus on students developing, discussing and completing individual capstone projects. This includes an in-depth research paper and in-class presentation to allow students to explore their relevant interests in the music business. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3720 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 4939 - Internship in MEIS (1-3 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Performance Music (PMUS)

PMUS 1001 - Music Appreciation (3 Credits)
Explores the style of music in the major compositional periods, including contemporary pop styles. This course will not satisfy any degree requirements for music majors. For non-music majors who want to learn how to listen to music with greater understanding and pleasure. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts; GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression.

PMUS 1011 - World Pop (3 Credits)
Explores popular music from around the world with an emphasis on the latest trends. This is for non-music majors who want to learn about other cultures and learn how to listen to all music with greater understanding. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

PMUS 1020 - Beginning Musicianship (3 Credits)
Provides basic musical and theoretical skills to students who do not have the proficiency to enroll in Theory I and Ear Training I. Major concepts include an introduction to music fundamentals, basic ear training, introduction to sight singing and an applied understanding of the keyboard. This course will not satisfy any degree requirements for Music majors. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 1021 - Piano Class For Non-Majors (1 Credit)
Elementary group instruction in piano skills for non-majors. Course focuses upon development of basic reading and performance skills for the non-Music Major. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1022 - Piano Class II for Non-Majors (1 Credit)
Intermediate to Advanced instruction in piano skills for non-majors. Course focuses on further development of reading and performance skills for the non-Music Major. Prereq: PMUS 1021 or permission of instructor. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1021

PMUS 1023 - Piano Class I (1 Credit)
This course focuses on beginning note reading in both treble and bass clefs, learning one octave major key scales, basic harmonization, and beginning improvisation. Students perform in both individual and group settings. Restriction: Restricted to MUSC-BS majors within the College of Arts & Media. For sub-plans MMM, MRA, MPF, SWR : Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B. For sub-plans MSB and MST: no coreqs. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts Media. For sub-plans MMM, MRA, MPF, SWR : Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B. For sub-plans MSB and MST: no coreqs.

PMUS 1024 - Piano Class II (1 Credit)
This course focuses on intermediate sight reading, technique, chord vocabulary, major and minor scales, and improvisation. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Prereq: PMUS 1023. Coreq: PMUS 1200 and 1210 for Audition Track students only; no corequisites required for Non-audition Track students. Max hours: 1 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1023 and Coreq: PMUS 1200 and 1210 for Audition Track students only; no corequisites required for Non-audition Track students.

PMUS 1025 - Piano Class III (1 Credit)
Students entering this course are expected to have general fluency in major and minor scales. The course focuses on expanding chord vocabulary, sight reading, transposition, and performing more advanced repertoire. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Prereq: PMUS 1024. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1024 (sub-plans MMM or MRA or MPF or PRA or MST or MSB or PMT or SWR) Coreq: PMUS 2100 and PMUS 2110 (sub-plans MMM or MPF or MRA or PRA or SWR) Restriction: MUSC-BS

PMUS 1026 - Piano Class IV (1 Credit)
Students entering this course are expected to have fluency in sight reading, major and minor scales. The course focuses on harmonizing with complex chords, playing by ear, improvisation, and playing repertoire in broader range of key signatures. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Course meets in Roland Piano Lab. Prereq: PMUS 1025. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1025 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1040 - Class Guitar (1 Credit)
Designed to provide each student with a basic knowledge of the fretboard. The course material focuses on beginning note reading, basic chord forms and elementary improvisation. Students have the opportunity to perform in both individual and group settings. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1041 - Class Guitar II (1 Credit)
This group guitar class is designed to go beyond PMUS 1040 and provide students with an advanced knowledge of the fretboard. The course material focuses on advance position note reading, complex chord forms and scale vocabulary. Students have the opportunity to perform in both individual and group settings. Max hours: 1 Credit.
Grading Basis: Letter Grade
Repeatable. Max Credits: 1.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1045 - Class Guitar I for Non-Majors (1 Credit)
This class will address basic techniques and concepts of playing the guitar, for non-majors. Students will gain a basic proficiency with regard to picking and fingerstyle technique, and learn essential contemporary harmony through the performance of etudes and songs. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1046 - Class Guitar II for Non-Majors (1 Credit)
This class will address basic techniques and concepts of playing the guitar, for non-majors. Students will gain a basic proficiency with regard to picking and fingerstyle technique, and learn essential contemporary harmony through the performance of etudes and songs. Prereq: PMUS 1045. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1045

PMUS 1050 - Voice Class I (1 Credit)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Development of technique, confidence, and control through group and solo singing. Development of repertoire that includes contemporary and commercial vocal styles. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1051 - Voice Class I for Non-Majors (1 Credit)
Voice technique and repertoire for non-music majors taught in a group setting. Students will learn basics of healthy singing technique and how to sing in multiple genres in both group and solo formats. For non-majors with little or no previous singing experience. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1060 - Voice Class II (1 Credit)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Extension of PMUS 1050, with opportunity to continue to develop individual skills in singing. Development of technique, confidence, and control through group and solo singing. Development of repertoire that includes contemporary and commercial vocal styles. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1061 - Voice Class II for Non-Majors (1 Credit)
Intermediate Voice technique for non-majors taught in a group setting. Students will learn elements of technique, style and repertoire geared toward non-majors. Some singing experience or successful completion of Voice I for Non-Music Majors required. Prereq: PMUS 1051 or permission from the instructor. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1051

PMUS 1100 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common practice period of classical music, and their relationship to contemporary music concepts. Coreq: PMUS 1110 and PMUS 1023. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1101 - Music Theory & Ear Training Lab (1 Credit)
Provides supplemental instruction and tutoring for students enrolled in Theory I and Ear Training Sight Signing I. Course activities include training in the following subject areas: scale formation and identification, chord spelling and identification, interval spelling and identification, basic harmonic analysis and rhythmic dictation. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 1105 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common periods of practice, and their relationship to contemporary music concepts. Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115 and PMUS 1105.

PMUS 1110 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Coreq: PMUS 1100 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1115 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1105. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115 and PMUS 1105.

PMUS 1119 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB.

PMUS 1120 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common periods of practice, and their relationship to contemporary music concepts. Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB.

PMUS 1200 - Music Theory II (3 Credits)
The study of harmonic and melodic elements as they relate to modern, jazz, and commercial music. Topics include contemporary chord spelling, chord substitution, transposition, voice leading, harmonic analysis and modes. Prereq: PMUS 1023, 1100, and 1110. Coreq: PMUS 1210 and PMUS 1024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1023/MU 161B, 1100/MU 1110, and 1110/MU 1120 Coreq: PMUS 1210 and 1024/MU 162B Restriction: Restricted to MUSC-BS majors within in the College of Arts and Media

PMUS 1210 - Ear Training and Sight Singing II (1 Credit)
An intermediate aural skills laboratory course that reinforces the concepts taught in Music Theory II through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music.. Prereq: PMUS 1100 and PMUS 1110. Coreq: PMUS 1200 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1023/MU 161B, 1100/MU 1110, and 1110/MU 1120 Coreq: PMUS 1200/MU 1130 and 1024/MU 162B Restriction: Restricted to MUSC-BS majors within in the College of Arts and Media

PMUS 1211 - Ear Training and Sight Singing II (1 Credit)
An intermediate aural skills laboratory course that examines interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Prereq: PMUS 1119; Restricted to MUSC-BS majors with a sub-plan of MST. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1119; Restricted to MUSC-BS majors with a sub-plan of MST.

PMUS 1310 - Sight Reading and Improvisation (2 Credits)
Explores the techniques and concepts of instrumental jazz/commercial improvisation and beginning sight reading. Major concepts include understanding and interpreting the construction of jazz harmonic nomenclature and the mastery of the melodic elements of improvisation. Prereq: PMUS 1200, 2.0 credits from PMUS 1801 to PMUS 1823 (MIS Applied Lesson). Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200 and (2.0 credit hours from PMUS 1801-1823)
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1420 - UCD A Cappella Voices Ensemble (1 Credit)
Beginning Ensemble. A cappella choir. This course will focus on choral singing to further the student's musical and vocal skills. Emphasis will be on successful preparation for the advanced a cappella groups. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 1440 - Acoustic Guitar Ensemble (1 Credit)
Beginning Ensemble. This course explores the techniques and repertoire of acoustic guitar. Musical styles include: jazz, Latin, bluegrass, Renaissance, Baroque, tango and blues. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 1470 - Performance Practice Ensemble (1 Credit)
This beginning-level ensemble explores individual and group performance settings for first year audition-based MEIS students. Course skills include: performance protocol, presentation, self assessment and peer assessment. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1480 - Improvisation I (2 Credits)
Introduction to the techniques and concepts of instrumental improvisation. Major concepts include identifying and improvising over common musical forms, understanding chord construction and chord/scale relationships, and developing an ability to improvise appropriately in a number of common styles. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 1500 - General Recital (1 Credit)
This pass/fail course is a co-requisite for all students enrolled in applied music instruction. Students will evaluate and critique musical performances and presentations as well as develop an informed understanding of live musical performance as it pertains to diversity of genre and excellence in musical achievement. Restriction: Restricted to MUSC BS majors, and GMUS minors. Repeatable. Max hours: 12 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 12.
Restriction: Restricted to BS MUSC majors, and GMUS minors

PMUS 1502 - Applied Bass (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1522 - Applied Bassoon (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1532 - Applied Clarinet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1542 - Applied Bass Clarinet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1552 - Applied Flute (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1562 - Applied French Horn (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1572 - Applied Guitar (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1574 - Applied Guitar, Singer/Songwriter (1 Credit)
Private instruction guitar specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program and have declared guitar as their primary instrument. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1582 - Applied Banjo (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1610 - Topics in Performance Music (3 Credits)
Various topics related to music performance. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PMUS 1612 - Applied Drum Kit (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1620 - Topics: Performance Music II (2 Credits)
Various topics related to music performance. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1630 - Topics: Performance Music III (3 Credits)
Various topics related to music performance. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PMUS 1632 - Applied World Percussion (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1642 - Applied Piano (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1644 - Applied Piano, Singer/Songwriter (1 Credit)
Private instruction in piano specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program and have declared piano as their primary instrument. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1662 - Applied Saxophone (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1672 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Restriction: Restricted to MUSC majors within the College of Arts and Media. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1682 - Applied Trombone (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1692 - Applied Trumpet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1702 - Applied Violin (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1712 - Applied Viola (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1722 - Applied Cello (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1732 - Applied Voice (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1734 - Applied Voice, Singer/Songwriter (1 Credit)
Private instruction in voice specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1801 - Appl Electric Bass, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1802 - Appl String Bass, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1803 - Applied Guitar, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1804 - Applied Percussion, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1805 - Applied Drum Kit, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1806 - Applied Piano, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1808 - Applied Voice, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1809 - Applied Electronic Digital Instrument, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1815 - Applied Banjo, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1821 - Applied Cello, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1822 - Applied Viola, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1823 - Applied Violin, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1901 - Applied Electric Bass (1 Credit)
Private music lessons for General Music Minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music Minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1903 - Applied Guitar (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1905 - Applied Drum Kit (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1906 - Applied Piano (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music Minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1908 - Applied Voice (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1909 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1923 - Applied Violin (1 Credit)
Private music lessons for General Music minors majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 2020 - Prague's Musical Legacy (3 Credits)
Introduces students to composers and music of central Europe, with an emphasis on Czech music and culture. Additional topics include: aesthetics of central European film music; current trends in Slavic music; and the influence of the Czech language and history in music creation.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PMUS 2050 - The Holistic Musician (3 Credits)
This course is designed to examine and explore the development and practice of health and wellness for musicians, identifying and establishing career objectives, and developing core strategies to thrive as a contemporary artist-musician. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 2092 - Commercial Piano Styles I (2 Credits)
This course will teach students how the piano is used in major commercial piano styles of the twentieth and twenty-first centuries. Students will develop a found of skills and knowledge that can be applied to professional music settings. Students must pass a piano audition or have permission from the instructor. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 2093 - Commercial Piano Styles II (2 Credits)
This course with teach students in-depth stylistic performance skills, strategic improvisation, composition, and arranging. Students must pass a piano audition, or complete PMUS 2092, or have permission from the instructor. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2095 - Commercial Guitar Styles and Theory - Harmony (2 Credits)
A comprehensive guitar course that focuses on harmonic theory specific to the guitar fingerboard. Topics include: chord voicing and inversions, jazz and commercial accompaniment styles including walking bass, bossa nova, funk and finger picking. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2096 - Commercial Guitar Styles and Theory - Melody (2 Credits)
A comprehensive guitar course that focuses on harmonic theory specific to the guitar fingerboard. Topics include: tetrachords, scales, modes, arpeggios, finger technique development and improvisation. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2097 - Commercial Singing I (2 Credits)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Development of contemporary solo vocal repertoire (pop, rock, jazz, rhythm and blues) and traditional styles. Training in all aspects of vocal performance needed for live performance and recording sessions (microphone technique, stage presence, appropriate vocal styles and delivery). Development of solid understanding of vocal technique and its application to all vocal styles. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 2098 - Commercial Singing II (2 Credits)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Extension of PMUS 3010, with opportunity to continue to develop individual skills in commercial solo singing. Development of contemporary solo vocal repertoire (pop, rock, jazz, rhythm and blues) and traditional styles. Training in all aspects of vocal performance needed for live performance and recording sessions (microphone technique, stage presence, appropriate vocal styles and delivery). Development of solid understanding of vocal technique and its application to all vocal styles.
Prereq: PMUS 3010. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 2100 - Music Theory III (3 Credits)
Exposes students to the theoretical aspects of Western European classical music from the Baroque period to the Classical period. Emphasis is placed on the melodic aspects of classical music including the creation of melody and the combining of melodies into polyphonic structures. Prereq: PMUS 1200, 1210, and 1024. Coreq: PMUS 1025 and 2110. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1024/MU 162B, 1200, and 1210 Coreq: PMUS 1025, PMUS 2110 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 2110 - Ear Training and Sight Singing III (1 Credit)
An advanced laboratory course designed to help students listen to music analytically and to apply the harmonic principles learned in Music Theory III to the performance of music. Prereq: PMUS 1200 and PMUS 1210. Coreq: PMUS 2100 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1024/MU 162B, 1200, and 1210 Coreq: PMUS 1025 and 2100 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media
Typically Offered: Fall.

PMUS 2200 - Jazz Theory (3 Credits)
Explores music theory as it applies to the genres of jazz and popular music. The topics include the theory of jazz improvisation, an analysis of jazz and popular music forms, the transcription and analysis of pop/jazz rhythms and melodies, and chord substitutions. Prereq: PMUS 1200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200/MU 1130 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2220 - Songwriting Production (3 Credits)
This course explores methods of composition and arranging using sample-based software. Prereq: PMUS 1200, PMUS 1210 and MUSC 2300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200/MU 1130, 1210, and PMUS 2310/MUSC 2300
Restriction: Restricted to MUSC majors

PMUS 2310 - Introduction to Songwriting (3 Credits)
Studies the craft of songwriting. Emphasis is on the creation of original melodies and lyrics. A variety of non-classical contemporary musical styles are considered. Prereq: PMUS 1100, and either PMUS 1023 or PMUS 1040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1100, and either PMUS 1023 or PMUS 1040.

PMUS 2315 - Introduction to Songwriting (3 Credits)
Studies the craft of songwriting. Emphasis is on the creation of original melodies and lyrics. A variety of non-classical contemporary musical styles are considered. Prereq: PMUS 1105, 1115 and (1.0 credit from PMUS 1901-1923). Restriction: Restricted to General Music Minors GMUS-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1105, 1115 and (1.0 credit from PMUS 1901-1923).
Restriction: Restricted to General Music Minors GMUS-MIN.

PMUS 2320 - Songwriting Analysis (3 Credits)
This course presents an analysis of songs across genres and decades, including pop, rock, folk, singer/songwriter, punk, rap, indie, and bluegrass. Students isolate and compare lyrical, melodic, harmonic, rhythmic, and formal elements. Prereq: PMUS 1200. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200

PMUS 2420 - Electro/Acoustic Ensemble (1 Credit)
Intermediate Ensemble. This course will study established methods used as agents of musical creativity in the practice of improvised music. Focus on real-time musical collaboration utilizing musical vocabularies from a wide range of sources. Instrumentation of many kinds may be utilized. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2430 - Pop/Rock Ensemble (1 Credit)
Intermediate Ensemble. This course will focus on group rehearsals of contemporary music with challenging technical and vocal requirements. Students will gain experience in transcribing and creating simple arrangements, learning adequate musicality, performing presentation and group cooperation. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2435 - Hip Hop/R&B Ensemble (1 Credit)
Intermediate Ensemble. This course will focus on group rehearsals of hip hop and R&B with challenging technical and vocal requirements. Students will gain experience in transcribing and creating simple arrangements, learning adequate musicality, performing presentation and group cooperation. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PMUS 2450 - Bluegrass Ensemble (1 Credit)
Ensemble designed to give students the opportunity to explore Bluegrass music and related folk/country styles through performance, listening and discussion. Important artists, repertoire, musical trends, and historical perspectives will be studied. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Typically Offered: Fall, Spring.

PMUS 2470 - Mobile Device Ensemble (1 Credit)
This ensemble will be comprised of students utilizing only laptop computers and mobile devices (e.g., iPads & iPhones) to create music. The ensemble will explore various contemporary styles including house, dance, ambient and other current electronic music. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.

PMUS 2490 - Django Jazz Ensemble (1 Credit)
Ensemble designed to give students the opportunity to explore the genre "gypsy jazz" and related styles through performance, listening and discussion. Important artists, repertoire, musical trends, and historical perspectives will be studied. Open to advanced instrumentalists and vocalists, audition based. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2495 - New Electronics Orchestra Ensemble (NEO) (1 Credit)
A performance laboratory for the combination of electronic and acoustic instruments, including improvisation, composition, as well as live video and game sound design. Class requires either an audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2502 - Applied Bass (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2572 - Applied Guitar (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572 (Two semesters). Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2582 - Applied Banjo (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2612 - Applied Drum Kit (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2632 - Applied World Percussion (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2642 - Applied Piano (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2672 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2692 - Applied Trumpet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2702 - Applied Violin (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2712 - Applied Viola (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2722 - Applied Cello (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2732 - Applied Voice (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2742 - Applied Tuba (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1742 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2750 - Functional Guitar Skills: Acoustic Guitar Styles (2 Credits)
This course is designed to introduce students to the fundamental architecture and techniques of contemporary acoustic guitar styles. The first part of the course will explore the techniques, repertoire and styles of Fingerstyle Guitar, while the second half will be dedicated to Flatpicking styles and techniques. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2751 - Functional Guitar Skills: Electric Guitar Styles (2 Credits)
This course is designed to introduce students to the fundamental architecture and techniques of contemporary electric guitar styles with regard to studio and live performance situations. Students will also explore the business aspects of music performance including marketing, self-assessment, career strategies, recording, and press kits. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2855 - Music in Cuba Study Abroad (3 Credits)
Explores Cuban music in its cultural context, examining the development of musical genres, and the current musical and cultural landscape. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3060 - Ensemble Engineer (1 Credit)
This engineer position is designed to provide audio support for a various performing ensembles. Duties include live audio reinforcement during concerts and rehearsals, audio archiving, organization and equipment management. Enrollment is limited to one semester for non-audition track students and two semesters for audition-track students. Prereq: MUSC 4530. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: MUSC 4530

PMUS 3070 - Ensemble Manager (1 Credit)
This manager position is designed to provide booking, promotional and organizational support for various performing ensembles. Enrollment is limited to one semester for non-audition track students and two semesters for audition-track students. Prereq: MUSC 3690. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: MUSC 3690

PMUS 3100 - US Music: Social & Political Impact (3 Credits)
Examines and describes the social meaning of American music with particular reference to the roles of major ethnic groups in the creation of this music and the way that the music reveals attitudes toward these groups. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

PMUS 3110 - Social and Political Implications of American Music (3 Credits)
Examines and describes the social meaning of American music with particular reference to the roles of major ethnic groups in the creation of this music, and the way that the music reveals attitudes toward these groups. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3200 - Popular Music Performance Skills (2 Credits)
Students develop live performance skills including expression, stage presence and creating energy on stage, as well as connecting with the audience. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall, Spring.

PMUS 3210 - Introduction to Teaching Private Music Lessons (3 Credits)
Prepares students to teach private music lessons. Includes a survey of teaching styles from around the world, exercises, guest lectures, practical guidance for establishing a teaching studio and student research presentations. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 3220 - Vocal Pedagogy (2 Credits)
Students will develop a working knowledge of postural, breathing, articulatory, and vocal anatomy, vocal hygiene, and methodology prior to teaching voice in to prevent harm. Students will learn how to listen critically and develop intuition, analytical, and diagnostic skills.
Restriction: Restricted to Music majors. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3300 - Advanced Jazz Improvisation (2 Credits)
Explores the techniques and concepts of instrumental jazz/commercial improvisation and sight reading. Major concepts include understanding and interpreting the construction of jazz harmonic nomenclature and the mastery of the melodic elements of improvisation. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 2200 Restriction: Restricted to MUSC majors

PMUS 3310 - Songwriting Analysis & Creative Exercises (3 Credits)
Presents concepts of songwriting that build upon those presented in MUSC 2300. Students are expected to understand and discuss musical concepts and lyric structure and use these concepts in the creation of original songs. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3320 - Popular Music Arranging (3 Credits)
This course will focus on techniques, technologies and strategies for contemporary arranging. Students score original compositions for various instrumentation using notation software. Prereq: PMUS 1200, PMUS 1210, and PMUS 1024. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200, PMUS 1210, and PMUS 1024 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3330 - Advanced Vocal Improvisation (2 Credits)
Provides study of harmony, style and advanced improvisation techniques for vocalists. Course activities include study of scat singing, syllables, accents, rhythmic patterns, and phrasing over standard chord changes in several genres. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PMUS 2200 Restriction: Restricted to MUSC majors
Typically Offered: Spring.

PMUS 3340 - Commercial Songwriting (3 Credits)
This course is designed to explore songwriting for publishing and that supports moving picture. Students will gain an understanding and have practical application of analyzing, understanding, writing and pitching music for publishing, film, tv and advertisement. Prereq: PMUS 3310. Restriction: Restricted to Sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 3310 Restriction: Restricted to Sophomore standing or higher.

PMUS 3450 - Singer/Songwriter Ensemble (1 Credit)
Advanced Ensemble. Focus on student compositions of original songs with lyrics and instrumental accompaniment including creation of lead sheets for band performances. Individual and group songwriting is explored. Students participate in community-building activities including community engagement and a songwriting retreat. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 3460 - Ninth Street Singers Ensemble (1 Credit)
Signature Ensemble. Elite a cappella mixed choir. This course will focus on group rehearsals of various genres of vocal ensemble music, including pop, rock, jazz, musical theater, and gospel. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 3502 - Applied Bass (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502 and PMUS 2502 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3572 - Applied Guitar (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572 and PMUS 2572 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3582 - Applied Banjo (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582 and PMUS 2582 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3612 - Applied Drum Kit (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612 and PMUS 2612 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3632 - Applied World Percussion (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632 and PMUS 2632 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3642 - Applied Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642 and PMUS 2642 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3652 - Applied Jazz Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1652 and PMUS 2652 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3662 - Applied Saxophone (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1662 and PMUS 2662 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3672 - Applied Electronic Digital Instrument (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672 and PMUS 2672 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3692 - Applied Trumpet (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692 and PMUS 2692 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3702 - Applied Violin (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702 and PMUS 2702 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3712 - Applied Viola (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712 and PMUS 2712 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3722 - Applied Cello (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722 and PMUS 2722 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3732 - Applied Voice (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732 and PMUS 2732 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3772 - Applied Singer/Songwriter (2 Credits)
This is a 2-credit course consisting of one-on-one, hour-long weekly lessons in songwriting and performance skills. Aspects of transcription, analysis, and career development will be incorporated. Co-requisites - PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring.

PMUS 3825 - Real History of Rock and Roll (3 Credits)
Examines the historical and social framework developments in music from its roots in country, through jazz and blues to current trends. Special emphasis is given to guest lecturers and their expertise performing, covering and presenting the music. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3827 - History Of Jazz (3 Credits)
This course will give students an inside look at the history and radical changes brought about by the musicians, technology and the social interplay between US social history and jazz music by examining the music & musicians that performed it. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3828 - History of Bluegrass (3 Credits)
This course will cover the history of the music and musicians that contribute to the development of the Bluegrass musical style. Topics to be covered include early country music, traditional bluegrass, and contemporary bluegrass. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

PMUS 3829 - A Survey of Heavy Metal (3 Credits)
A history of heavy metal from the 1970's to present day exploring how religion, politics, community, and censorship have helped to shape this unique genre of music. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3832 - Music in Culture (3 Credits)
A broad introduction to music as a human phenomenon, this course examines how diverse musics live in and as culture. Through a study of diverse musical elements, genres, periods, styles, and composers in jazz, folk, popular, and world music traditions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3835 - History of Electronic Music (3 Credits)
This course will give students an inside look at the history and radical changes brought about by the musicians, technology and the social interplay between US social history and electronic music by examining the music & musicians that performed it. Restriction: Restricted to sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

PMUS 3840 - Independent Study: PMUS (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PMUS 4060 - Music Theory Analysis (3 Credits)
Students analyze the harmonic, melodic, and formal aspects of the music from various musical time periods and genres which include Baroque, Classical, Romantic, Contemporary Classical, jazz and popular music. Prereq: PMUS 2110 and 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 2110 and PMUS 2200 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 4200 - Senior Recital Project (2 Credits)
The capstone course for performance majors that coincides with their senior recital. The project focuses on musical and thematic material from the student's senior recital and may include: historical research, theoretical analysis, transcriptions and creation of a digital portfolio. Max hours: 2 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4310 - Genre Songwriting for TV/Film and Emerging Media (3 Credits)
This course explores songwriting through genre characteristics and methodologies that intersect with synchronization licensing for TV, film, and emerging media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1025, 2100, 2110, and 3310 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 4410 - Claim Jumpers Ensemble (1 Credit)
Signature Ensemble. The Claim Jumpers will focus on group rehearsals of significant traditional jazz literature, masterworks of classic jazz of the 1920's, and creativity within the traditional jazz genre at the highest level. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4430 - Guitar Ensemble (1 Credit)
Signature Ensemble. Advance jazz guitar group. This course will focus on group rehearsals of bebop and fusion. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4440 - Voz de la Clave (1 Credit)
Signature Ensemble. This ensemble performs Salsa and Afro-Caribbean music. Ensemble time is spent rehearsing repertoire and learning about Latin music concepts. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4470 - Lark/Advanced A Cappella Ensemble (1 Credit)
Lark is an advanced a cappella ensemble for female identifying individuals. Admission to this group is by audition only. Members must have strong sight reading skills, advanced musicianship and performance skills. Lark performs several times per semester. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4502 - Applied Bass (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502, PMUS 2502, PMUS 3502 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4572 - Applied Guitar (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572, PMUS 2572, PMUS 3572 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4582 - Applied Banjo (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582, PMUS 2582, PMUS 3582 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4600 - Topics in Music Performance (3 Credits)
Various topics related to music performance. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4612 - Applied Drum Kit (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612, PMUS 2612, PMUS 3612 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4632 - Applied World Percussion (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632, PMUS 2632, PMUS 3632 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4642 - Applied Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642, PMUS 2642, PMUS 3642 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4672 - Applied Electronic Digital Instrument (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672, PMUS 2672, PMUS 3672 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4692 - Applied Trumpet (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692, PMUS 2692, PMUS 3692 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4702 - Applied Violin (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702, PMUS 2702, PMUS 3702 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4712 - Applied Viola (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712, PMUS 2712, PMUS 3712 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4722 - Applied Cello (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722, PMUS 2722, PMUS 3722 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4732 - Applied Voice (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732, PMUS 2732, PMUS 3732 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4772 - Applied Singer/Songwriter (2 Credits)
This is a 2-credit course consisting of one-on-one, hour-long weekly lessons in songwriting and performance skills. Aspects of transcription, analysis, and career development will be incorporated. Plan Code: MUSC-BS SWR; Co-requisites - PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring.

PMUS 4840 - Independent Study: PMUS (1-3 Credits)
Repeatable.Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

General Music Minor

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The general music minor offers students the opportunity to gain an informed understanding of the field of music performance, its language and history. Courses cover applied lessons on a specific instrument and/or voice, music theory, ear training and general recital. Students will also take courses that deal with the function and operation of the music industry, including an introduction to the music business, audio production, and music in culture

Program Delivery

- This is an on-campus program.

Declaring This Major

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements. Contact the Music Department at MEIS.Dept@ucdenver.edu for more information on the minor.

Code	Title	Hours
Required Courses		
Take **all** of the following General Music Minor Required courses (17 semester hours/8 courses total):		
PMUS 1105	Music Theory I	3
PMUS 1115	Ear Training and Sight Singing I	1
PMUS 1901 - 1923	Applied Lessons	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
MUSC 2750	Introduction to Music Business	3
MUSC 1540	Introduction to Audio Production	3
Take **one** of the following courses:		1
PMUS 1021	Piano Class For Non-Majors	
PMUS 1040	Class Guitar	
PMUS 1045	Class Guitar I for Non-Majors	
Take **one** of the following courses:		3
PMUS 2315	Introduction to Songwriting	
PMUS 3832	Music in Culture	
Total Hours		**17**

Music Business Emphasis, Audition Track, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The music business emphasis prepares musicians for careers in such fields as artist management, music publishing, concert promotion, record production, venue management, label promotion, distribution and entertainment law.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website for detailed guidelines and information.
- Students who wish to pursue the music business emphasis, audition track, are required to pass an entrance audition on their primary instrument or voice as part of the application process and to pass varying levels of performance proficiency as part of the curriculum. Please contact the College of Arts & Media at CAM@ucdenver.edu for further information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Emphasis Requirements

1. Students must complete PMUS 1470 Performance Practice Ensemble during their first or second semester of Applied Instrument/Voice.

Code	Title	Hours
Musicianship Course Groups		
Take **all** of the following Musicianship course groups:		
Group One		
PMUS 1100	Music Theory I	3
PMUS 1110	Ear Training and Sight Singing I	1
PMUS 1023	Piano Class I	1
Group Two		
PMUS 1200	Music Theory II	3
PMUS 1210	Ear Training and Sight Singing II	1
PMUS 1024	Piano Class II	1
Group Three		
PMUS 2100	Music Theory III	3
PMUS 2110	Ear Training and Sight Singing III	1
PMUS 1025	Piano Class III	1
Group Four		
PMUS 2200	Jazz Theory	3
PMUS 1026	Piano Class IV	1
Group Five		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Six		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Seven		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Eight		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Musicianship		
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History Elective	3
PMUS or MUSC ___	Music History Elective	3
PMUS ___	Ensemble	1
PMUS ___	Ensemble	1
Music & Entertainment Industry Studies Core		
Take the following Music & Entertainment Industry Studies Core course:		
MUSC 1540	Introduction to Audio Production	3
Music Business Emphasis		
Take **all** of the following Music Business Emphasis courses:		
MUSC 2700	Introduction to Music Business	3
MUSC 3210	Music and Entertainment Marketing	3
MUSC 3220	Artist Management	3
MUSC 3690	Concert Promotion and Venue Management	3
MUSC 3700	Music and Entertainment Business in the Digital Age	3
MUSC 3710	CAM Records	3
MUSC 3755	Music Publishing	3
MUSC 3720	Law and the Music Industry	3

MUSC 4740	Music Business Analysis	3
MUSC 4890	Music Business Senior Seminar	3
Music Business Electives		
Take **six** semester hours of Music Business elective.		6
Total Hours		**81**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Music Business Emphasis, Non-Audition Track, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The music business emphasis prepares undergraduates for careers in such fields as artist management, music publishing, concert promotion, record production, venue management, label promotion, distribution and entertainment law.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website for detailed guidelines and information.
- Students who wish to pursue the music business emphasis, non-audition track, are not required to complete an audition as part of the application process. Students will be assessed for varying levels of performance proficiency as part of the curriculum. Please contact the College of Arts & Media at CAM@ucdenver.edu for further information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Code	Title	Hours
Musicianship		
Take **all** of the following Musicianship course groups:		
PMUS 1120	Music Theory I	3
PMUS 1119	Ear Training and Sight Singing I	1
PMUS 1500	General Recital	1
Take **one** of the following Musicianship courses:		1
PMUS 1023	Piano Class I	
PMUS 1040	Class Guitar	
Take **one** of the following Musicianship courses:		1
PMUS 1023	Piano Class I	
PMUS 1024	Piano Class II	
PMUS 1040	Class Guitar	
PMUS 1041	Class Guitar II	
PMUS 1050	Voice Class I	
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History Elective	3
Music Elective (6 semester hours)		6
Music & Entertainment Industry Studies Core		
Take the following Music & Entertainment Industry Studies Core course:		
MUSC 1540	Introduction to Audio Production	3
Music Business Emphasis		
Take **all** of the following Music Business Emphasis courses:		
MUSC 2700	Introduction to Music Business	3
MUSC 3210	Music and Entertainment Marketing	3
MUSC 3220	Artist Management	3
MUSC 3690	Concert Promotion and Venue Management	3
MUSC 3700	Music and Entertainment Business in the Digital Age	3
MUSC 3710	CAM Records	3
MUSC 3720	Law and the Music Industry	3
MUSC 3755	Music Publishing	3
MUSC 4740	Music Business Analysis	3
MUSC 4890	Music Business Senior Seminar	3
Music Business Emphasis Electives		
Take **twenty-seven** semester hours of Music Business Emphasis electives.		27
Total Hours		**79**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approval electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Music Industry Studies Minor

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

Music is a rapidly evolving field that requires practitioners to have a broad understanding of the main functional areas and intimate knowledge of the creation and operation of music organizations. The music industry studies minor provides students with a strong foundation in the functional operations of the music industry. At the completion of the minor, students will have an in-depth knowledge of music marketing, artist management, concert promotion and music publishing.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements. Contact the Music Department at MEIS.Dept@ucdenver.edu for more information on the minor.

Code	Title	Hours
Required Courses		
Take **all** of the following Music Industry Studies Minor courses (15 semester hours/5 courses total):		
MUSC 2750	Introduction to Music Business	3
MUSC 3250	Music and Entertainment Marketing	3
MUSC 3260	Artist Management	3
MUSC 3699	Concert Promotion and Venue Management	3
MUSC 3760	Music Publishing	3
Total Hours		**15**

There is a recommended sequence for the Music Industry Studies course work. Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing and any prerequisite updates.*

Performance Emphasis, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The performance emphasis includes specialized courses in small performance ensembles, applied private study, contemporary improvisation, and analysis and history. Students gain a diverse set of performance skills in commercial, jazz, classical and experimental music styles.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website for detailed guidelines and information.
- Students who wish to pursue the performance emphasis are required to pass an entrance audition on their primary instrument or voice as part of the application process and to pass varying levels of performance proficiency as part of the curriculum. This includes passing a Sophomore Proficiency on their primary instrument or voice in order to maintain performance emphasis status. Each student is also required to successfully complete a junior recital and the 2-credit PMUS 4200 Senior Recital Project. Please contact the College of Arts & Media at CAM@ucdenver.edu for further information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Emphasis Requirements

1. Students must complete PMUS 1470 Performance Practice Ensemble during their first or second semester of Applied Instrument/Voice.

Code	Title	Hours
Music & Entertainment Industry Studies Core		
Take **all** of the following Music & Entertainment Industry Studies Core courses:		
MUSC 2700	Introduction to Music Business	3
MUSC 1540	Introduction to Audio Production	3
Take **one** of the following Music & Entertainment Industry Studies Core courses:		3
MUSC 3210	Music and Entertainment Marketing	
MUSC 3220	Artist Management	
Musicianship		
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History elective	3
Musicianship Course Groups		
Take **all** of the following Musicianship course groups:		
Group One		
PMUS 1100	Music Theory I	3
PMUS 1110	Ear Training and Sight Singing I	1
PMUS 1023	Piano Class I	1
Group Two		
PMUS 1200	Music Theory II	3
PMUS 1210	Ear Training and Sight Singing II	1
PMUS 1024	Piano Class II	1
Group Three		
PMUS 2100	Music Theory III	3
PMUS 2110	Ear Training and Sight Singing III	1
PMUS 1025	Piano Class III	1
Group Four		
PMUS 2200	Jazz Theory	3
PMUS 1026	Piano Class IV	1
Group Five		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
Group Six		
PMUS ___	Ensemble	1
Group Seven		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Eight		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Nine		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Performance Emphasis Course Groups		
Take **all** of the following Performance Emphasis course groups:		
Group One		
PMUS 3__	Applied Instrument/Voice	2

PMUS ___	Ensemble	1
Group Two		
PMUS 3__	Applied Instrument/Voice	2
PMUS ___	Ensemble	1
Group Three		
PMUS 4__	Applied Instrument/Voice	2
PMUS ___	Ensemble	1
Group Four		
PMUS 4__	Applied Instrument/Voice	2
PMUS ___	Ensemble	1
Performance Emphasis		
Take **all** of the following Performance Emphasis courses:		
PMUS 2050	The Holistic Musician	3
PMUS 3210	Introduction to Teaching Private Music Lessons	3
PMUS 4060	Music Theory Analysis	3
PMUS 4200	Senior Recital Project	2
Music Electives		
Take **fourteen** semester hours of Music electives. Specific elective courses may be required depending on student's primary instrument.		14
Total Hours		**83**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Recording Arts Emphasis, Audition Track, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The recording arts emphasis focuses on contemporary analog and digital technology as it is used in music recording, sound reinforcement and media applications (Internet, video games, interactive art installations, etc.). While mastering technology skills and formats, musicians also study the artistic and aesthetic applications of technology to recording, reinforcement, composition and performance.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website for detailed guidelines and information.
- Students who wish to pursue the recording arts emphasis, audition track, are required to pass an entrance audition on their primary instrument or voice as part of the departmental application process, and to pass varying levels of performance proficiency as part of the curriculum. Students must also gain admission to the recording arts emphasis before being able to take any of the upper-division (3000/4000 level) recording arts course work. Please see the recording arts website and contact the College of Arts & Media at CAM@ucdenver.edu for further information and any updates.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Emphasis Requirements

1. Students must complete PMUS 1470 Performance Practice Ensemble during their first or second semester of Applied Instrument/Voice.

Code	Title	Hours
Musicianship Course Groups		
Take **all** of the following Musicianship course groups:		
Group One		
PMUS 1100	Music Theory I	3
PMUS 1110	Ear Training and Sight Singing I	1
PMUS 1023	Piano Class I	1
Group Two		
PMUS 1200	Music Theory II	3
PMUS 1210	Ear Training and Sight Singing II	1
PMUS 1024	Piano Class II	1
Group Three		
PMUS 2100	Music Theory III	3
PMUS 2110	Ear Training and Sight Singing III	1
PMUS 1025	Piano Class III	1
Group Four		
PMUS 2200	Jazz Theory	3
PMUS 1026	Piano Class IV	1
Group Five		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Six		
PMUS 1__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Seven		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group Eight		
PMUS 2__	Applied Instrument/Voice	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Musicianship		
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History Elective	3
PMUS or MUSC ___	Music Elective	3
PMUS ___	Ensemble	1
PMUS ___	Ensemble	1
Music & Entertainment Industry Studies Core		
Take the following Music & Entertainment Industry Studies Core course:		
MUSC 2700	Introduction to Music Business	3
Take **one** of the following Music & Entertainment Industry Studies Core courses:		3
MUSC 3210	Music and Entertainment Marketing	

MUSC 3220	Artist Management	
Other Course		
Take the following course:		
MUSC 1800	Acoustics for Audio Production	3
Recording Arts Emphasis		
Take **all** of the following Recording Arts Emphasis courses:		
MUSC 1541	Audio Production I	3
MUSC 1542	Audio Production Lab	1
MUSC 1560	Audio Production II	3
MUSC 2550	Critical Listening for Recording Arts	3
MUSC 2580	Audio Production III	3
MUSC 2590	Mastering & Advanced Digital Audio	3
MUSC 3505	Introduction to Audio Post Production	3
MUSC 3530	Live Sound Reinforcement	3
MUSC 4580	Audio Production Seminar	3
Recording Arts Emphasis Electives		
Take **six** semester hours of Recording Arts Emphasis electives.		6

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Recording Arts Emphasis, Non-Audition Track, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

The recording arts emphasis focuses on contemporary analog and digital technology as it is used in music recording, sound reinforcement and media applications (Internet, video games, interactive art installations, etc.). While mastering technology skills and formats, musicians also study the artistic and aesthetic applications of technology to recording, reinforcement, composition and performance.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Students who wish to pursue the recording arts emphasis, non-audition track, are not required to complete an audition as part of the departmental application process. Students will be assessed for varying levels of performance proficiency as part of the curriculum. Please see the recording arts website and contact the College of Arts & Media at CAM@ucdenver.edu for further information and any updates.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Code	Title	Hours
Musicianship Course Groups		
Take **all** of the following Musicianship course groups:		
Group 1		
PMUS 1120	Music Theory I	3
PMUS 1119	Ear Training and Sight Singing I	1
Group 2		
PMUS 1211	Ear Training and Sight Singing II	1
Group 3		
PMUS 1500	General Recital	1
Musicianship		
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History Elective	3
PMUS or MUSC ___	Music Elective	3
Take **one** of the following Musicianship courses:		
PMUS 1040	Class Guitar	
PMUS 1023	Piano Class I	
Take **one** of the following Musicianship courses:		1
PMUS 1023	Piano Class I	
PMUS 1024	Piano Class II	
PMUS 1040	Class Guitar	
PMUS 1041	Class Guitar II	
PMUS 1050	Voice Class I	
Music & Entertainment Industry Studies Core		
Take the following Music & Entertainment Industry Studies Core course:		
MUSC 2700	Introduction to Music Business	3
Take **one** of the following Music & Entertainment Industry Studies Core courses:		
MUSC 3210	Music and Entertainment Marketing	
MUSC 3220	Artist Management	
Other Course		
Take the following course:		
MUSC 1800	Acoustics for Audio Production	3
Recording Arts Emphasis		
Take **all** of the following Recording Arts Emphasis courses:		
MUSC 1541	Audio Production I	3
MUSC 1542	Audio Production Lab	1
MUSC 1560	Audio Production II	3
MUSC 2550	Critical Listening for Recording Arts	3
MUSC 2580	Audio Production III	3
MUSC 2590	Mastering & Advanced Digital Audio	3
MUSC 3530	Live Sound Reinforcement	3
MUSC 3505	Introduction to Audio Post Production	3
MUSC 4580	Audio Production Seminar	3
Recording Arts Emphasis Electives		
Take **twenty eight** semester hours of Recording Arts Emphasis electives.		28

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Singer/Songwriter Emphasis, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

Students in the singer/songwriter emphasis complete specialized courses in songwriting and arranging repertoire while developing their performance skills through small performance ensembles and applied private study of voice, accompanying instrument and songwriting.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website for detailed guidelines and information.
- Students who wish to pursue the singer/songwriter emphasis are required to pass a singer/songwriter audition on their accompanying instrument **and** voice as part of the application process, and to pass varying levels of performance proficiency as part of the curriculum. This includes passing a Sophomore Proficiency in order to maintain singer/songwriter emphasis status. Each student is also required to successfully complete a junior recital and the 2-credit PMUS 4200 Senior Recital Project. Please contact the College of Arts & Media at CAM@ucdenver.edu for further information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Emphasis Requirements

1. Students are required to complete PMUS 3450 Singer/Songwriter Ensemble in their first semester of Applied Music and it is recommended that they take it again in their second semester.
2. Students must complete PMUS 1470 Performance Practice Ensemble during their third or fourth semester of Applied Music.
3. Students must complete both semesters of applied instrument lessons on their primary audition instrument.

Code	Title	Hours
Music & Entertainment Industry Studies Core		
Take **all** of the following Music & Entertainment Industry Studies Core courses:		
MUSC 1540	Introduction to Audio Production	3
MUSC 2700	Introduction to Music Business	3
MUSC 3210	Music and Entertainment Marketing	3
MUSC 3220	Artist Management	3
MUSC 3755	Music Publishing	3
Musicianship Course Groups		
Take **all** of the following Musicianship course groups:		
Group 1		
PMUS 1100	Music Theory I	3
PMUS 1110	Ear Training and Sight Singing I	1
PMUS 1023	Piano Class I	1
Group 2		
PMUS 1200	Music Theory II	3
PMUS 1210	Ear Training and Sight Singing II	1
PMUS 1024	Piano Class II	1
Group 3		
PMUS 2200	Jazz Theory	3
PMUS 2110	Ear Training and Sight Singing III	1
PMUS 1025	Piano Class III	1
Musicianship		
Take **one** of the following Musicianship courses:		1-2
PMUS 1026	Piano Class IV	
PMUS 2750	Functional Guitar Skills: Acoustic Guitar Styles	
PMUS 2751	Functional Guitar Skills: Electric Guitar Styles	
Take **all** of the following Musicianship courses:		
PMUS 3832	Music in Culture	3
PMUS ___	Music History Elective	3
PMUS 2050	The Holistic Musician	3
Music Elective (2 semesters)		3
Singer/Songwriter Emphasis Course Groups		
Take **all** of the following Singer/Songwriter Emphasis course groups:		
Group 1		
PMUS 1574	Applied Guitar, Singer/Songwriter	1
or PMUS 1644	Applied Piano, Singer/Songwriter	
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group 2		
PMUS 1574	Applied Guitar, Singer/Songwriter	1
or PMUS 1644	Applied Piano, Singer/Songwriter	
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group 3		
PMUS 1734	Applied Voice, Singer/Songwriter	1
PMUS 1500	General Recital	1

PMUS ___	Ensemble	1
Group 4		
PMUS 1734	Applied Voice, Singer/Songwriter	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group 5		
PMUS 3772	Applied Singer/Songwriter	2
PMUS ___	Ensemble	1
Group 6		
PMUS 3772	Applied Singer/Songwriter	2
PMUS ___	Ensemble	1
Group 7		
PMUS 4772	Applied Singer/Songwriter	2
PMUS ___	Ensemble	1
Group 8		
PMUS 4772	Applied Singer/Songwriter	2
PMUS ___	Ensemble	1
Singer/Songwriter Emphasis		
Take **all** of the following Singer/Songwriter Emphasis courses:		
PMUS 2220	Songwriting Production	3
PMUS 3200	Popular Music Performance Skills	2
PMUS 3310	Songwriting Analysis & Creative Exercises	3
PMUS 3320	Popular Music Arranging	3
PMUS 4310	Genre Songwriting for TV/Film and Emerging Media	3
PMUS 4200	Senior Recital Project	2

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Songwriter Entrepreneur Emphasis, Audition Track, Music BS

Introduction

Please click here (p. 225) to see general Music & Entertainment Industry Studies information.

Students in the Songwriter Entrepreneur emphasis complete specialized courses that develop a balance of songwriting craft, musicianship, demo creation, and business knowledge. The Songwriter Entrepreneur major consists of courses required in the Singer/Songwriter major in addition to classes in audio production, music business, and performance skills.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- The Bachelor of Science (BS) in Music has a competitive application process. Please refer to the Department of Music & Entertainment Industry Studies website (https://artsandmedia.ucdenver.edu/areas-of-study/music-entertainment-industry/about-music-entertainment-industry-studies/) for detailed guidelines and information.
- Students who wish to pursue the Songwriter Entrepreneur emphasis are required to pass a **songwriter entrepreneur audition on their accompanying instrument AND voice as part of the application process**, and to pass varying levels of performance proficiency as part of the curriculum. This includes passing a Sophomore Proficiency in order to maintain Songwriter Entrepreneur emphasis status.
- Please contact the College of Arts & Media at CAM@ucdenver.edu for further information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a BS in Music, students must complete musicianship courses, Music & Entertainment Industry Studies core courses and requirements from one of the four emphasis areas: performance, singer/songwriter, music business or recording arts.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.

Emphasis Requirements

1. Students are required to complete PMUS 3450 Singer/Songwriter Ensemble in their first semester of Applied Music and it is recommended that they take it again in their second semester.
2. Students must complete PMUS 1470 Performance Practice Ensemble during their third or fourth semester of Applied Music.
3. Students must complete both semesters of applied instrument lessons on their primary audition instrument.

Code	Title	Hours
Take all of the following Musicianship course groups:		
Group 1		
PMUS 1100	Music Theory I	3
PMUS 1110	Ear Training and Sight Singing I	1
PMUS 1023	Piano Class I	1
Group 2		
PMUS 1200	Music Theory II	3
PMUS 1210	Ear Training and Sight Singing II	1
PMUS 1024	Piano Class II	1
Group 3		
PMUS 2200	Jazz Theory	3
Take **one** of the following Musicianship courses:		
PMUS 1025	Piano Class III	1
PMUS 2095	Commercial Guitar Styles and Theory - Harmony	2
PMUS 2096	Commercial Guitar Styles and Theory - Melody	2
Take one of the following Musicianship courses:		
PMUS 1026	Piano Class IV	1
PMUS 2750	Functional Guitar Skills: Acoustic Guitar Styles	2
PMUS 2751	Functional Guitar Skills: Electric Guitar Styles	2
Take all of the following Songwriter Entrepreneurship Emphasis course groups:		
Group 1		
PMUS 1574	Applied Guitar, Singer/Songwriter	1
or PMUS 1644	Applied Piano, Singer/Songwriter	
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
PMUS 1470	Performance Practice Ensemble	1
Group 2		
PMUS 1574	Applied Guitar, Singer/Songwriter	1
or PMUS 1644	Applied Piano, Singer/Songwriter	
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
Group 3		
PMUS 1734	Applied Voice, Singer/Songwriter	1
PMUS 1500	General Recital	1
PMUS ___	Ensemble	1
PMUS 3450	Singer/Songwriter Ensemble	1
Group 4		
PMUS 1734	Applied Voice, Singer/Songwriter	1
PMUS 1500	General Recital	1
PMUS ____ Ensemble		1
Take all of the following Music Business courses		
MUSC 2700	Introduction to Music Business	3

MUSC 3210	Music and Entertainment Marketing	3
MUSC 3220	Artist Management	3
MUSC 3690	Concert Promotion and Venue Management	3
MUSC 3755	Music Publishing	3
MUSC 3700	Music and Entertainment Business in the Digital Age	3
MUSC 3710	CAM Records	3
MUSC 3720	Law and the Music Industry	3
MUSC 4740	Music Business Analysis	3
Music Business Elective		3
Take all of the following Music courses		
PMUS ___	Ensemble	1
PMUS ___	Ensemble	1
MUSC 1540	Introduction to Audio Production	3
PMUS 2220	Songwriting Production	3
PMUS 3310	Songwriting Analysis & Creative Exercises	3
PMUS 3320	Popular Music Arranging	3
PMUS 3832	Music in Culture	3
PMUS 4310	Genre Songwriting for TV/Film and Emerging Media	3
PMUS ___	Music History Elective	
Music Electives		3

Please contact the College of Arts & Media at CAM@ucdenver.edu for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Visual Arts

Chair: Michelle Carpenter
Office: CU Denver Building, 815N
Visual Arts Office: CU Building, Suite 800
Telephone: 303-315-1500

Overview

The Department of Visual Arts offers professional instruction in six interrelated areas: art history, art practices, 3D animation, digital design, illustration, and photography.

Visual Arts provides a vital educational environment where future artists, designers, scholars and curators explore the horizons of their own talents in an atmosphere of critical dialogue and professional art and design practice. Students learn and experience various media of animation, digital design, drawing, illustration, painting, photography and transmedia sculpture, all within the rich context of a research university. Learning is predicated on both an understanding of art and media theory, and on the practical knowledge of methods and materials used in making art and design today. Art history studies focus on historical knowledge integrated with critical writing and analysis.

The department prides itself on fostering an appreciation for diverse approaches to visual culture and to reaching out to the larger art history, arts and design communities. Internships are available.

Graduating seniors receiving the Bachelor of Fine Arts (BFA) degree are required to participate in the BFA thesis exhibition during their last semester of study. This exhibition is scheduled for each spring term only.

Programs

- 3D Graphics and Animation Emphasis, BFA (p. 278)
- Art History Minor (p. 280)
- Art History, Fine Arts BA (p. 281)
- Art Practices Emphasis, BFA (p. 282)
- Art Practices Minor (p. 284)
- Digital Design Emphasis, BFA (p. 285)
- Digital Design Minor (p. 287)
- Illustration Emphasis, BFA (p. 288)
- Illustration Minor (p. 290)
- Photography Emphasis, BFA (p. 291)
- Photography Minor (p. 292)

Many of the above options require FINE 2600 Art History Survey I *and/or* FINE 2610 Art History Survey II. *Either course may also count toward Core Humanities (as part of the General Education requirements). Contact the College of Arts & Media at* CAM@ucdenver.edu *for details.*

Faculty

Full Professors:

Joann Brennan, MFA, Massachusetts College of Art
Carol Golemboski, MFA, Virginia Commonwealth University
Rian Kerrane, MFA, University of New Orleans
Melissa Furness, MFA, University of Iowa
Maria Elena Buszek, PhD, University of Kansas
Michelle Carpenter, MFA, University of Colorado Boulder

Associate Professors:

Quintin Gonzalez, MFA, Yale University
Bryan Leister, MFA, George Mason University
Jeffrey Schrader, PhD, New York University, MA, Oberlin College
Travis Vermilye, MFA, University of Michigan

Assistant Professor:

Yang Wang, PhD, The Ohio State University

Assistant Professor Clinical Teaching Track:

Howard Cook, MFA DC, National University
Matthew Rutland, MFA, University of Southern California

Principal Instructor:

Vivian George, MFA, Yale University

Senior Instructors:

Michael Brohman, MA, University of Colorado Denver
Jeremy Brown, BA, Hampshire College
Elizabeth Pugliano, PhD, Boston University
Rebecca Heavner, MLA, University of Colorado Denver
William Adams, MA and MFA, University of New Mexico

Instructors:

Paul Conner, BA, Art Institute of Colorado
Stephen Schaf, MFA, Academy of Art University, San Francisco
Lynn Mandziuk, MFA, Savannah College of Art and Design

Digital Animation (DACD)

DACD 2810 - DAC: Modeling 1 (3 Credits)
A lecture/lab course focused on the mastery of creating surface models for digital 3D content. Students will develop skills/knowledge about the processes and techniques for building complex 3D objects with an emphasis on artistic excellence through application of current 3D technologies. Prereq: FINE 1810, FINE 1820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820 Restriction: Restricted to FINE-BFA with ANI sub-plan majors within the College of Arts and Media

DACD 2820 - DAC: Surfacing and Lighting 1 (3 Credits)
A Lecture/Lab course focused on the fundamentals of lighting and surfacing in a digital 3D environment. Students will develop skills and knowledge about the processes and techniques involved in creating realistic and/or narratively powerful materials and lighting for 3D animated films. Prereq: FINE 1810, FINE 1820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820 Restriction: Restricted to FINE-BFA with ANI sub-plan majors within the College of Arts and Media

DACD 2830 - DAC: Surfacing and Lighting 2 (3 Credits)
A Lecture/Lab course exploring advanced topics in the areas of surfacing, material design, lighting, and post-production. Students will further develop skills and knowledge learned in Surfacing and Lighting I. Emphasis will be placed on collaborative workflows for lighting and material design. Prereq: DACD 2810, DACD 2820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2810, DACD 2820, and acceptance into DAC (FINE_BFA ANI)

DACD 2850 - DAC: Modeling 2 (3 Credits)
A lecture/lab course focused on mastery of skills for creating organic digital 3D models. Students will develop skills/knowledge to shape, mold, transform/articulate, and deform digital 3D shapes. Focus will be on creating digital models, with an emphasis on artistic excellence through application of current 3D technologies. Prereq: DACD 2810, DACD 2820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2810, DACD 2820, and acceptance into DAC (FINE_BFA ANI)

DACD 3810 - DAC: Production Practices (3 Credits)
This is a lecture/lab course focused on the creation and implementation of collaborative workflows for CG filmmaking. Students will learn about 3D production pipelines and how they can be used to effectively and efficiently collaborate on large-scale projects. Prereq: DACD 2830 or DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830 or DACD 2850, Acceptance into DAC.

DACD 3820 - Animation 1: Introduction to Animation and Rigging (3 Credits)
A studio course focused on foundational skills for animating digital 3D objects/characters. Students explore the process/techniques of key frame/pose-to-pose animating considering character performance, thought, constraints and velocity with an emphasis on artistic excellence through applications of current 3D technologies. Prereq: FINE 1810 and FINE 1820 and acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820, and acceptance into DAC (FINE-BFA ANI)

DACD 3821 - DAC: VFX Rigging & Animation I (3 Credits)
A studio course focused on foundational skills for animating and rigging full digital 3D characters. Students explore the process/techniques of rigging for motion capture characters and adjusting their performance with consideration for thought, and animation with an emphasis on realistic VFX driven character performance. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE-BFA ANI)

DACD 3830 - Advanced Character Animation (3 Credits)
A studio course focused on mastery of skills for rigging and animating digital 3D characters. Students explore the processes/techniques of animation rigging and its relationship to animating character performances. Prereq: DACD 3820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI)

DACD 3831 - Character FX (3 Credits)
A studio course focused on mastery of skills for rigging and animating digital 3D characters and objects and advance motion capture techniques. Students explore the processes/techniques of animation rigging and its relationship to realistic simulation of dynamic objects. Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI)

DACD 3835 - DAC: Visual Effects (3 Credits)
A lecture/lab course exploring the theory/techniques of creating visual effects sequences. Students explore how to develop complete effects shots, including shooting live plates, camera tracking, visual effects, and compositing, with an emphasis on artistic excellence through application of current 3D technologies. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE-BFA ANI)

DACD 3846 - Production I (3 Credits)
The first in a three-semester capstone experience focusing on the DAC-BFA thesis short. Students assemble a team, organize/develop production management tools, story animatic, and begin work on a high-production-value short or experience through an academic simulation of a real-world studio pipeline. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE_BFA ANI)

DACD 4810 - Production II (3 Credits)
The second in a three-semester capstone experience focusing on the production/post-production of the BFA thesis short. With teams formed and production plans set and initiated in DACD 3846: Production I, the student team completes its high-production-value animated short or experience. Prereq: DACD 3845 or DACD 3846, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3845 or DACD 3846, and acceptance into DAC (FINE_BFA ANI)

DACD 4820 - Production III (3 Credits)
The final semester of the DAC capstone experience focusing on finalizing their DAC-Senior-Short, preparing the student to enter the professional-world/graduate school, confirming their BFA Thesis presenting their body of work, website, demo-reel, and professional personal branding/resumes and becoming skilled at cover letters. Prereq: DACD 3845 or DACD 3846, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Prereq: DACD 3845 or DACD 3846, and acceptance into DAC (FINE_BFA ANI)

Fine Arts (FINE)

FINE 1000 - Fostering Creativity (3 Credits)
Through discussions, readings, writings and creative investigations, students will delve into theoretical and experiential approaches to creativity and consider how different kinds of creativity and passions can be identified, cultivated and leveraged in their current and future academic and professional lives. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

FINE 1001 - Introduction to Art (3 Credits)
The course introduces visual analysis and critical examination of art from prehistory to modern times. Through reading, vocabulary development, group discussions, tests, and research projects, students will learn how to appreciate art and critically evaluate form, content, and context. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression; Denver Core Requirement, Arts.

FINE 1002 - International Perspectives through Animation (3 Credits)
This course is a look at world political, economic, social, and technological challenges through the lens of animation and visual storytelling. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FINE 1003 - Creative Coding (3 Credits)
Through discussions, readings, writings, and creative investigations, students will identify and evaluate the digital tools and software present in everyday life while they explore and learn the basics of computer code and the power of code as a creative tool. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1004 - Video Games, Story and Society (3 Credits)
By investigating various methods and theories, this course will examine how stories are crafted to fit the interactive aspects of video games, their resemblance and dependence on traditional stories, and how unorthodox plots, characters, and impact game play. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall.

FINE 1100 - Drawing I (3 Credits)
This course explores the act of drawing as a process of visual thought as an initial step to artistic expression. Students will develop an understanding of the basic principles of drawing as a way of learning to see. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1111 - First-Year Seminar (1-3 Credits)
Restriction: Restricted to Freshman level students. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to Freshman level students

FINE 1120 - Photographic Fundamentals (3 Credits)
Students learn fundamentals of digital photography through creative assignments that promote a broad understanding of the photographic medium. Topics include digital camera operation, sizing and resolution, principles of design, and interpreting photographic meaning. This course is designed for non-art majors. Restriction: Open to all students except FINE-BFA & BA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Open to all students except FINE-BFA BA

FINE 1140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 1150 - Introduction to Darkroom Photography (3 Credits)
Students learn traditional, film-based photographic practice. Topics such as camera functions, film processing, black and white darkroom printing, and alternative darkroom techniques are explored through demonstrations, critiques, readings, and discussions of historical and contemporary photography. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1400 - Two Dimensional Design (3 Credits)
Focuses on the concepts and visual elements of all forms of two-dimensional art. Students gain an understanding of basic design principles as they analyze and visually articulate formal concerns in viewing contemporary and historical artworks as applied to studio problems. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1450 - Visual Culture: Ways of Seeing (3 Credits)
A core course for majors and non-majors Visual Culture: Ways of Seeing explores how the meaning of imagery is encoded in cultural settings and transforms globally through changing technology and is integrated into daily life. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression; Denver Core Requirement, Arts.

FINE 1500 - Three-Dimensional Design (3 Credits)
Students explore the elements of art and the principles of design applied to three-dimensional design while developing an understanding of material properties, techniques, processes and tools. Creative practice is accompanied by written, theoretical and verbal critical thinking skills. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1810 - Digital 3D Foundations (3 Credits)
A lecture/lab course that explores the foundations of creating digital 3D content. Primary focus is an introduction to current 3D software. Class lectures, demonstrations and hands-on application will expose the student to the expectations for commercial high-end 3D animation production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 1812 - 3D Computer Graphics: Producing Animation (3 Credits)
An online course that explores the theory, practices and fundamentals of the producing 3D animation. Students will explore the foundations of the animation process Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1820 - Animation Foundations (3 Credits)
A lecture/lab course that explores the foundations of animation. Primary focus is an introduction to foundational animation techniques and methods. Class lectures, demonstrations and hands-on application will expose the student the expectations for high-end animation production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 1822 - 3D Computer Graphics: Introduction to Digital 3D (3 Credits)
An online course that explores the foundations of creating digital 3D content. Primary focus is an introduction to current 3D software. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1825 - Characters and Environmental Design (3 Credits)
Students will learn to design characters and environments based on experimentations with color, proportion, texture, and expression that add depth and context to a story. Students will examine the history of character design and environment as applied to animation, children's books, and toys identifying how practical and cultural processes influence design. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 2020 - Drawing II (3 Credits)
Students explore complex problems in the representation of space and learn observational drawing methods. Perceptual and constructed perspective is utilized to visualize three-dimensional form. Contemporary and historical artworks are studied with emphasis on the design of effective compositions. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 2030 - Life Drawing (3 Credits)
This course introduces the student to the human figure, addressing anatomy, movement and proportion. Discussion of historic and contemporary critical methods supplement studio practice. Exploring a variety of drawing media, students expand their drawing skills and relate the principles of composition and design to figure drawing. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 2105 - PRE-DIGD – Human-Centered Design, Innovation and Prototyping (3 Credits)
Introduces collaborative interdisciplinary design and innovation from a human perspective. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 2155 - Introduction to Digital Photography (3 Credits)
Students learn digital image manipulation, input and output strategies, and digital camera functions through assignments that emphasize conceptual development. Presentations, readings, projects and class discussions help students gain an understanding of the role of digital imaging in contemporary photography. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2200 - Painting I (3 Credits)
This course is an introduction to the language of painting. Students will learn to develop composition in layers, working from value to color and from direct observation to abstraction while exploring the range of visual possibilities that painting offers. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2405 - Introduction to Digital Design (3 Credits)
A project-based exploration of the design potentials of vector, raster and motion based digital media. Through project critiques, discussion and demonstration students will create projects that examine technology as an art medium and a design strategy. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2406 - Introduction to Digital Art & Imaging (3 Credits)
A project-based exploration of vector, raster, and motion-based digital media. Through project critiques, discussion and demonstration students will create projects explore the creative and expressive potential of digital media. Max Hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2415 - Typography Studio (3 Credits)
A studio course that teaches principles of typography and organization that is the foundation of design and artistic practice. Through drawing, editing, and moving typographic forms, students will create projects that examine how typography is used to create meaning. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2420 - The Language of Design : What Makes Design Work (3 Credits)
Through lectures, readings and discussions students explore essential contemporary design movements and designers and their effects on design, visual culture and communication. In addition, students learn and practice critical thinking skills and have the opportunity to learn and practice design processes and problem solving techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2425 - Essential Type-Design Applications (3 Credits)
A studio devoted to learning the essential design-software needed to complete basic graphic design projects. Through lectures and creative projects students will learn how to create, manipulate, and prepare various types of art files for print or digital publishing. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2428 - Introduction to Scientific Media Design (3 Credits)
Through lectures, writings, readings, and discussions students will be introduced to Scientific Media Design as a profession as well as the history and emerging directions in the field. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2500 - Beginning Foundry (3 Credits)
Learn to produce metal castings. Bronze, aluminum and iron are cast into shapes by melting them into a liquid, pouring the metal into a mold, and removing the new solid form. Learn techniques understand equipment and explore form to create personal artwork using traditional and contemporary methods. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 2510 - Shaping Materials (3 Credits)
Creative investigation and design are applied towards conceptual ideas while students advance skills in 3D printing, wood, metal, plastics, fibers, vacuum forming. Advancing relationships with materials and tools is the premise for the exploration of individual visual vocabularies. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 2600 - Art History Survey I (3 Credits)
A lecture course studying Western and non-Western art from prehistory to medieval times, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students demonstrate knowledge of historical developments and an ability to analyze the arts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

FINE 2610 - Art History Survey II (3 Credits)
A lecture course studying Western and non-Western art from the Renaissance to today, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students demonstrate knowledge of historical developments and an ability to analyze the arts. Prerequisite applicable only for FINE-BA majors: FINE 2600. No prerequisite for all others. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BA and FINE 2600
Additional Information: Denver Core Requirement, Humanities.

FINE 2812 - 3D Computer Graphics: 3D Surface Modeling (3 Credits)
An online course focused on mastery of creating surface models for digital 3D content. Students will develop skills/knowledge about the processes and techniques for building complex 3D objects. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 1810 or 1812 and 1820 or 1822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 or 1812 and 1820 or 1822

FINE 2822 - Digital Cinematography (3 Credits)
A lecture/lab course focuses on mastery of digital cinematography and visual storytelling. This course translates key production techniques: composition, camera craft, depth of field, camera blocking, and more, into the 3D world. This unique approach bridges the gap between traditional live-action cinematography and cutting-edge 3D animation, giving the students skills/knowledge about cinematic theory, practices and methods, as applied to digital 3D content creation. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 2832 - 3D Computer Graphics: 3D Lighting and Rendering (3 Credits)
An online course focused on mastery of lighting the digital 3D environment. Students will develop skills/knowledge about the processes and techniques for creating realistic 3D lighting. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 2812 and 2822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2812 and 2822

FINE 2852 - 3D Computer Graphics: 3D Character Creation (3 Credits)
An online course focused on mastery of skills for creating digital 3D characters. Students will develop skills/knowledge to create digital characters. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 2812 and 2822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2812 and 2822

FINE 2995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

FINE 3010 - Illustration I: Image Making (3 Credits)
In a demonstration of expressive media, students develop their own point-of-view and style. Students work in a variety of media while learning historic and contemporary trends in illustration. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3014 - The Graphic Novel Workshop (3 Credits)
This course introduces students to the visual language of the graphic novel through the creation of sequential imagery and page development. Students will delve into the pictorial methods found in both historical and contemporary comic books, Manga and alternative cartooning. Prereq: FINE 1100; Prereq: FINE-BFA ILS: FINE 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100; Prereq: FINE-BFA ILS: FINE 2030

FINE 3030 - Media of Drawing (3 Credits)
Students apply traditional and mixed media skills, experimental printmaking, photography, and sculptural space to explore drawing. This course considers drawing as an active medium that can take on multiple dimensions where students create works that experiment with all aspects of the drawn mark and its translations. Prereq: FINE 1100 and FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100 and FINE 1500.
Typically Offered: Fall.

FINE 3040 - Color Theory: Studio and Screen-Based Practice (3 Credits)
This hybrid course delves into how color is essential to traditional studio-based and digital media artists through focusing on visual color and light perception, color mixing with pigment and digital applications, and the interaction of color. Prereq: FINE 1100, 1400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100 and FINE 1400.

FINE 3050 - Figure Painting (3 Credits)
This course is an exploration of representing the human form in pictorial space. Students will gain a knowledge of figural color, proportion, scale and space; and will understand the conceptual and visual weight carried by expressive gesture and figural form. Prereq: FINE 2030 and FINE 2200. Prereq: FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2600, FINE 2610. Prereq: PNDW-MIN: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2030 and FINE 2200 Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2600, FINE 2610 Prereq PNDW-MIN: FINE 2200

FINE 3115 - Mixed Media and Photography (3 Credits)
Students create artwork using techniques that combine photography and mixed media. Topics include expanding the photograph to a 3-dimensional form, working with light-sensitive materials, and manipulating the print surface. Students develop creative concepts that are enhanced by cross-disciplinary methods. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2155

FINE 3130 - Photography, Optics and Perspectives in Italy (3 Credits)
In this study abroad seminar course, students develop an understanding of their work within the context of the history of art and photography, particularly the artistic and scientific breakthroughs of the Renaissance, by exposing them to strategies and theories exemplified by the remarkably diverse and historically significant artwork that is available in collections in Florence, Italy. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 3135 - Historic Photographic Processes in Italy (3 Credits)
Investigates the relationship between critical concepts and alternative photographic processes in the unique cultural and artistic setting of Florence, Italy. Students create images using historic photographic methods such as salted paper, P.O.P., albumen, photo-polymer gravure and bromoil. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

FINE 3156 - Photography Studio and Lighting (3 Credits)
Students learn lighting techniques that inform the conceptual and aesthetic qualities of their photographs. Topics covered include studio practice; location photography; commercial business practices; shooting and lighting techniques; and professional presentation. Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 2155

FINE 3160 - Color and the Constructed Image (3 Credits)
Students explore traditional color photography, concept development and expressive uses of the medium. Topics include chromogenic printing, color theory, and 4x5 technique in assignments that focus on constructed imagery. Students learn about the creative impact of color on photographic representation. Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 1150

FINE 3161 - The Silver Fine Print (3 Credits)
Students learn advanced black and white darkroom techniques while translating ideas into photographic form. Techniques include the zone system, split filter printing, toning, montage printing, and film/paper choices. Students gain insight into photographic artists, techniques, and movements. Prereq: FINE-BFA PHO FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150

FINE 3162 - The Digital Fine Print (3 Credits)
Students learn the fine art of digital printing as it relates to photographic practice and theory. Assignments focus on conceptual development, advanced image manipulation, workflow, color management, and digital ink jet printing. Students gain insight into the role of digital imaging in contemporary culture. Prereq: FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 2155
Typically Offered: Fall.

FINE 3171 - Concepts and Processes in Photography (3 Credits)
Students develop skills in alternative photographic techniques. Processes covered include camera-less and pinhole photography, reticulation, non-silver printing, liquid emulsions, digital/traditional cross-manipulation. Students gain insights into the relationship between ideas and experimental ways of creating images. Spring only. Prereq: FINE-BFA PHO: FINE 3161. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3161. Prereq: FINE 1150.

FINE 3172 - Photography and Community (3 Credits)
Students learn strategies for creating visual narratives through photographic projects that involve the Denver community. Projects incorporate service learning, documentary photography, text and image, digital manipulation, digital printing, scanning, and handmade artist books. Spring only. Prereq: FINE-BFA PHO: FINE 3161, FINE 3162. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3162. Prereq: FINE 2155.

FINE 3200 - Intermediate Painting and Drawing (3 Credits)
In this course students develop a body of work that expands on previous course work, to make the transition from assignment-based work to an independent body of work, and to prepare for advanced level study in painting and drawing. Prereq: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2200

FINE 3240 - Abstract Painting and Drawing (3 Credits)
This course explores the methods of abstraction as applied to painting and drawing. Through developing a body of paintings and drawings, students will gain an understanding of complex formal structures in the development of their work. Prereq: FINE 1100, FINE 2200. Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2200, FINE 2600, FINE 2610. Prereq PNDW-MIN: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100, FINE 2200 Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2200, FINE 2600, FINE 2610 Prereq PNDW-MIN: FINE 2200

FINE 3300 - Painting, Drawing and the Printed Image (3 Credits)
This course explores the role of technology in the history of painting/drawing alongside studio practice. Students produce works that explore personal symbolism through the combination of graphically printed and hand-produce marks while utilizing technology as a tool in painting/drawing. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3340 - Topics in Studio Art (3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

FINE 3342 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 3343 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 3400 - Designing for Web and Mobile Apps (3 Credits)
In a design laboratory, students learn how to design for the web and mobile devices. Through lectures, writings, readings, discussion and critiques, students will learn about HTML, CSS, CMS, web hosting, analytics and the principles of UX/UI. Restriction: Restricted to sophomore standing or above. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 3404 - Typography II (3 Credits)
A design laboratory that teaches advanced principles of typography including multiple page documents and complex typographic systems for print and screen. Students will create complex design projects that explore the relationship between type and image. Prereq: FINE 2415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2415

FINE 3405 - Introduction to Digital Video (3 Credits)
A studio course for non-design-majors that focuses on the basics of storytelling using digital video. Through class projects, screenings, discussions and readings, students explore the concepts of montage and strategies to develop compelling video for artistic and commercial purposes. Prereq: FINE-BFA APC: FINE 2155. Note: class may not be taken by Digital Design or Transmedia majors for credit toward degree. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA APC: FINE 2155

FINE 3410 - Illustration II: Digital Media (3 Credits)
Students consider the diverse perspectives of clients, viewers, and context while developing concept art and imaginative illustrations. Digital workflows, visual research, and an iterative process are emphasized. Prereq: FINE 3010. Restriction: FINE-BFA ILS or FINE-BFA APC. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3010. Restriction: FINE-BFA ILS or FINE-BFA APC

FINE 3414 - Motion Design I (3 Credits)
A course devoted to understanding time based imagery that focuses on utilizing video and motion graphics as a creative communication tool. Students create projects that explore topics using video, animation, time and motion using a non-linear digital editing software. Restriction: Restricted to students with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 3415 - Design Studio I (3 Credits)
In a design laboratory students learn to turn ideas into visual solutions through the application of design principles. Through lectures, writings, readings, discussion and critiques of projects assigned students will build visual literacy in relation to digital design. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to FINE-BFA majors with sub-plan of DIG or DIGD minors within the College of Arts and Media.

FINE 3417 - Design Research (3 Credits)
This seminar class examines methods and processes used by designers to better understand the content they are asked to communicate while addressing increasingly complex social, technological and economic problems. Class topics will include: user interface and experience design, demographics, storyboarding, branding, and concept mapping. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to FINE-BFA majors with sub-plan of DIG or DIGD minors within the College of Arts and Media.

FINE 3420 - Printing Preparation and Process (3 Credits)
Through print shop visits, creating, manipulating, and preparing various types of art files for print or digital publishing, students will explore the history, various processes, and file preparation that are essential to producing final designed products. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3424 - Interactive Media (3 Credits)
A foundational interactive design workshop exploring how to convey message and deliver information. Through critiques of projects, discussion and research, students will learn principles of user interface design, aesthetics and structure including their potential cultural impact. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Prereq: FINE 3414 and FINE 3415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3414 and FINE 3415. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN.

FINE 3434 - 3D Motion Design (3 Credits)
A course devoted to 3D as a medium for creating works of art. Through demonstration, discussion, readings and project based explorations, students will learn to navigate and create in the 3D digital environment. Restrictions: Restricted to FINE-BFA DIG or DIGD MIN. Prereq: FINE 3444, 3464. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3444, 3464 Restrictions: Restricted to FINE-BFA DIG or DIGD MIN
Typically Offered: Fall.

FINE 3444 - Interactive Media II (3 Credits)
An intermediate interactive design workshop devoted to using interactive design to solve communication and information problems at scale. Through investigations, readings and discussions students will create projects that explore user experience design, accessibility, and advanced research techniques. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3424, 3454. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3424, 3454 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Fall.

FINE 3450 - Digital Painting (3 Credits)
Digital Painting is a studio designed for student exploration of artistic expression using digital tools for traditional painting and illustration techniques. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3454 - Motion Design II (3 Credits)
An intense course devoted to using time and motion as a medium for communicating ideas and information. Through creative investigations, readings and discussions students explore linkages between non-linear editing, animation and 3-dimensional animation as used in motion graphics. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3414 and FINE 3415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3414, 3415. Restriction: Restricted to FINE-BFA DIG.
Typically Offered: Spring.

FINE 3464 - Design Studio II (3 Credits)
In a studio environment students will develop advanced projects using animation, interactivity and motion graphics to create innovative solutions to design problems. Students will learn to apply design theory to practice through discussion, critiques and assigned projects. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3424, 3454. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3424, 3454 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Spring.

FINE 3474 - Virtual Production and Experience (3 Credits)
A course focused on interactive and emerging applications for creating immersive experiences, with a focus on designing VR and in-person experiences using well-known applications, related technologies, methods, and fields including gaming, experience design, virtual painting, augmented reality, museum/interactive installation. Restriction: Sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

FINE 3500 - Installation Art (3 Credits)
Students learn to modify the way a particular space is experienced through material intervention in everyday public or private spaces. Material use incorporates found, fabricated and new media. Prereq: FINE 1100 and FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 1100 and FINE 1500.
Typically Offered: Spring.

FINE 3505 - Environmental Art (3 Credits)
Students create site-specific work to exist in a certain place or describe a specific location. This involves temporary outdoor landscaping combined with sited sculptural elements and gallery exhibition. The formal, political, historical, public, ecological, geographical and social context of the urban/rural environment will be explored. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE-BFA APC: FINE 1500

FINE 3510 - Form and Play (3 Credits)
3D printing, mold making, and soft sculpture using rubber, resins, alginate and plaster to cast and build in metal, resin, glass, synthetics, concrete, plastic, paper and biodegradable materials. Exploration of multiples, life size and small-scale forms with personal imagery. Prereq: FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 3515 - Public Art (3 Credits)
Students connect with professional/visiting artists installing public art works in Denver. Public relations, installation techniques, curatorial and administration skills are developed. Students learn to establish, maintain and promote public art collections. Prereq FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq FINE-BFA APC: FINE 1500

FINE 3520 - Sculpture: Contemporary Artists and Concepts (3 Credits)
Provides the art student (sculpture majors and non-majors) with a focused opportunity to look at contemporary sculpture, installation and performance art, and to examine the philosophical issues, processes, and methods, motivating practicing artists today. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3525 - Prototyping Sculpture (3 Credits)
This course will focus on contemporary professional practices and will cover topics such as project planning, an introduction to computer-aided design, fabrication, and digital outsourcing for the production of sculptural works. Prereq: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 1500
Typically Offered: Fall.

FINE 3530 - Electronic Art (3 Credits)
Video, sound and projection in contemporary sculpture. Introduction to sensors and motors and data visualization. A bridge between the digital laboratory and the sculpture studio in the context of object making, gallery and networked media. Prereq FINE-BFA APC: FINE 1500, FINE 3405. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq FINE-BFA APC: FINE 1500, FINE 3405
Typically Offered: Spring.

FINE 3532 - Maquette Design (3 Credits)
A maquette is model created to visualize a larger sculpture or character for inclusion in illustration or animation development. Students work in wide ranging media and a variety of approaches to conceptualize personal 2D, 3D and 4D imagery. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 3550 - Iron Casting (3 Credits)
Students learn traditional and innovative mold making techniques for casting iron. Casting techniques include working with found objects, lost wax, ceramic shell and sand molds. Furnace design and equipment fabrication are researched. Public performance is integral to the class. Prereq: FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA APC: FINE 1500

FINE 3555 - Concepts in Sculpture (3 Credits)
This course addresses varying topics and trends in sculpture. Students produce work focused on issues in the professional field and develop their voice as an artist through thematic exploration. Course content rotates each semester to cover the dynamics of the field. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: FINE-BFA APC: FINE 1500

FINE 3556 - Concepts in Studio Art (3 Credits)
This course addresses topics and trends in studio art. Students produce work focused on issues in the professional field and develop their voice as an artist through thematic exploration. Course content adapts to cover the dynamics of the field. Prereq: FINE 1100, FINE 1500 and FINE 2200. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: FINE 1100, FINE 1500 and FINE 2200.
Typically Offered: Fall.

FINE 3557 - Concepts in Illustration (3 Credits)
This course addresses varying topics and trends in illustration. Students produce work exploring contemporary issues in the professional realm and develop their distinctive illustrative voice through multiple media. Course content rotates each semester to cover the dynamics of the field. Prereq: FINE 2010. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE 2010

FINE 3630 - History of Photography (3 Credits)
Students examine the history of photography from its origins to the present. Emphasis is placed on photography as an artistic medium. Topics covered include important movements, photographers, and technical innovations, as well as photographer's broader role in visual culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3631 - Photography: Theory and Criticism (3 Credits)
Students investigate the historical texts of photographic criticism. Readings relate to photography as a fine art form, concentrating on 1970 to the present. Through discussions, readings and critical writing, students examine and appreciate the significance of photographic theory. Spring only. Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing.

FINE 3635 - Photography Now (3 Credits)
Students investigate trends in fine art photography from 1990 through the present. By examining current topics, styles, and techniques students gain insights into contemporary photographic practice and its relationship to the history and future of the medium. Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing.

FINE 3636 - Through the Lens: Photography and Diversity (3 Credits)
Students examine social issues relating to non-dominant cultures, minority groups, biases, and privileges through the lens of photographic imagery. Lectures, discussions, and assignments offer insights into the ways that photography both reflects and impacts attitudes about cultural diversity in the United States. Restriction: Restricted to students with Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.

FINE 3640 - Topics in Art History I: Art Before Modernism (1-3 Credits)
Variable: Art History lecture course pertaining to art before Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 3644 - Topics in Art History II: Modern and Contemporary (1-3 Credits)
Variable: Art History lecture course pertaining to art since Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 3775 - Asian Art After 1850 (3 Credits)
A lecture-based course about developments in art and architecture of China, Japan, and Korea after 1850. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Additional Information: Denver Core Requirement, International Perspectives.

FINE 3807 - Advanced Creature and Quadruped Animation (3 Credits)
This studio course is focused on the foundation creature animation skills practiced in most VFX houses today. Students will explore the process and techniques of keyframe and pose-to-pose animation. Considerations include character performance, behaviors, physical constraints, and motion through space with an emphasis on artistic excellence through applications of current 3D technologies. The focus being believability and nuance learned by careful study of live-action footage. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FINE 3808 - Live Action Compositing (3 Credits)
A studio course focused on the art and science of node-based digital compositing for live-action film and video. Students will develop skills/knowledge about the processes involved in combining, altering and enhancing live action footage using industry standard tools and techniques. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FINE 3814 - Digital 3D Methods: Motion Graphics for Animators (3 Credits)
An online course is an introduction to Motion Graphics, devoted to understanding time based imagery that focuses on utilizing video, typography and 3D content as a creative communication tool. Students will create projects that explore video, animation, time and motion. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3840 - Exploring Storyboarding- Foundational Techniques and Approaches (3 Credits)
Exploring Storyboarding will help you fall in love with making cinema. This course is a foundation to the art and craft of visual storytelling. This course teaches the language film, and techniques for illustrating action, composition, character, and drama.
Grading Basis: Letter Grade

FINE 3841 - Creating Visual Story - Narrative Techniques and Visual Design (3 Credits)
This course explores narrative methods used in animation, film, and connects film theory to visual storytelling. This course empowers you to engage with story process, and understand film theory as an interesting, integral, part of the visual storytelling creative process. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3842 - Storyboarding for Cinema and Game Previsualization (3 Credits)
A lecture/lab course covering the foundations of the cinematic storyboarding process/techniques used for previsualization in the film, entertainment design and game industries. Students will develop skills/knowledge for creating storyboards study and understand film theory, storytelling, film language and grammar, and filmic composition. Prereq: FINE 3841 or Junior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3841 or Junior standing

FINE 3845 - DAC: Preproduction for Story (3 Credits)
A seminar course focused on the story development/preproduction phases for the DAC senior thesis short. The principle focus of the course will be story development, preproduction activities and organizing the production team and production pipeline for the thesis short. Prereq: DACD 2830 or DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830 or DACD 2850, Acceptance into DAC.

FINE 3850 - DAC: Dynamic Simulation (3 Credits)
A lecture/lab course exploring the theory/techniques of dynamic and particle simulations for 3D content. Students explore how to develop effects (smoke, fire, steam, explosions) and dynamic materials (cloth), with an emphasis on artistic excellence through application of current 3D technologies. Restriction: Restricted to Junior standing or higher. Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.

FINE 3855 - Introduction to Unreal Engine (3 Credits)
Students will learn how to utilize and navigate Unreal Engine to produce interactive stories and immersive environments in a lecture-lab classroom. Students will build virtual worlds that use lighting, surface design, environments, and interactions to tell stories highlighting personal experiences and socially conscious narratives in a virtual production environment. Restriction: Restricted to Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

FINE 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 3995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

FINE 4000 - The Business of Art (3 Credits)
Through research, discussion and projects, students learn marketing, copyright and business practices necessary for a career as an illustrator or artist. Students will develop professional materials, identify potential markets and implement a plan to promote their work. Restriction: FINE-BFA or FINE-BA and junior or senior class standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA DRW: FINE 3220, 3230, and 3310

FINE 4001 - Illustration III: Investigative Methods (3 Credits)
Students will learn to use writing, research methods, and market analysis to develop original and unique approaches to illustration. Projects will explore how media choices and production processes impact potential markets and responses from the public. Prereq: FINE 3410. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts & Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3410. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts Media.
Typically Offered: Spring.

FINE 4002 - Illustration IV: Thesis Development (3 Credits)
Students will examine historical and contemporary trends in illustration while developing a research topic and writing a thesis paper. Students will produce new work and illicit responses from faculty and outside industry mentors as they begin to prepare a professional illustration portfolio. Prereq: FINE 4001. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4001. Restriction: FINE-BFA ILS
Typically Offered: Fall.

FINE 4003 - Illustration BFA Thesis (3 Credits)
Students will present their thesis project proposal, create original illustrations for their BFA Thesis exhibition and develop a professional illustration portfolio. Students will be expected to document their process and implement a promotional plan in order to build an audience for their work. Prereq: FINE 4002. Restriction: FINE-BFA ILS. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 4002. Restriction: FINE-BFA ILS
Typically Offered: Spring.

FINE 4020 - Anatomy for the Artist (3 Credits)
An intensive study of the human figure, focusing on its structure, movement and proportions. Skeletal and muscular systems are explored in depth using the classic texts of artistic anatomy to enhance students' drawings from observation. Prereq: FINE 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2030

FINE 4050 - Design in a Global Workplace (3-6 Credits)
Through intensive participatory workshops, study tours, and lectures this class examines the advantages of interdisciplinary community-based collaboration. This class also examines the complexities of cross disciple collaborations including multiple professional agendas, political and business establishments and the needs of the community. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 4140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 4195 - Advanced Photography I (3 Credits)
Students create an independent body of photographic work that integrates sophisticated concepts with technical mastery. Through critiques, presentations and discussions, students relate subject matter to historical and contemporary context. Students build expertise in the area of professional development in photography. Prereq: FINE-BFA PHO: FINE 3156, 3160, 3171, 3172, and 3630. Prereq: FINE 3161, 3162, 3171. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE-BFA PHO: FINE 3156, 3160, 3171, 3172, and 3630. Prereq: FINE 3161, 3162, 3171
Typically Offered: Fall.

FINE 4196 - Advanced Photography II (3 Credits)
Students create an independent body of photographic work that integrates sophisticated concepts with technical mastery. Through critiques, presentations and discussions, students relate subject matter to historical and contemporary context. Students build expertise in the area of professional development in photography. Prereq: FINE 4195. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE 4195.

FINE 4215 - Interdisciplinary Studio (3 Credits)
This is the first level of advanced studies in art practices where students create a body of work that expresses a more complex individual vision. Students learn to develop their creative work with self-selected materials and processes in support of focused concepts. Prereq: FINE 1100, FINE 1500, and FINE 2200. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 1100, FINE 1500 and FINE 2200.
Typically Offered: Fall.

FINE 4340 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 4350 - Topics in Digital Design (3 Credits)
Specialized topics are offered in new design technologies, theories, processes and conceptual thinking. Course subjects are unique and changing semester to semester. Restriction: Restricted to students with junior standing or higher or with special permission. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall, Spring, Summer.

FINE 4400 - Design Studio III (3 Credits)
Set up as a collaborative studio, students learn to identify problems in the cultural and urban environment and design solutions that address those problems. Through discovery and research students will learn how design can be a catalyst for change. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN or FINE-BFA 3D ANI or SCOM. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to FINE-BFA DIG or DIGD-MIN or FINE-BFA 3D ANI or SCOM.
Typically Offered: Fall.

FINE 4411 - Immersive Storytelling I (3 Credits)
This theory/research-oriented course teaches students in media and technical fields how to tell stories interactively using 360-degree video and computer-generated scenes that subjects experience through leading virtual reality headsets. We will touch on creating content for larger format immersive experiences. Restriction: Sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 4420 - Interactive Media III (3 Credits)
An advanced interactive design workshop where students will use current industry tools to explore a range of topics such as emerging technologies, design interactive prototypes, and experiential design. Through prototyping, discussion, readings, and critiques, students will create unique projects that explore contemporary and futurist topics. Prereq: FINE 3444. Restriction: Restricted to FINE-BFA DIG. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3444. Restriction: Restricted to FINE-BFA DIG.

FINE 4421 - Virtual Art Direction (3 Credits)
A course that examines the role of the art director in virtual production, including motion pictures, television and game design. This course focuses on the process of world building, and interaction design from the standpoint of the virtual production art director. Students will work on projects that give them hands on experience in virtual art direction for entertainment productions. Restriction: Restricted to Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

FINE 4422 - E-Commerce Web Design (3 Credits)
This course provides an overview of the concepts and principles of e-commerce website design and selling your products online. The content is geared toward design students who would like to build web stores for clients or yourself. By the end of the course, students will be able to create and manage their own online store. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 4425 - Motion III (3 Credits)
An intense workshop-laboratory devoted to advanced motion design techniques. Through creative investigation, the study of motion theory and hierarchy, compositing, filming techniques, broadcast parameters, aesthetics, typography and technical issues students will develop the in-depth knowledge necessary to excel as design professionals. Prereq: FINE 3454. Restriction: Restricted to FINE-BFA DIG. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3454. Restriction: Restricted to FINE-BFA DIG.

FINE 4434 - Virtual Landscapes (3 Credits)
In a studio environment students will explore place in relation to contemporary digital art practice. Through readings, lectures and production of projects assigned, students will create work that addresses the natural, urban and virtual environment. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-DIG: FINE 3414, 3415, 3424 or FINE-BFA SMD: FINE 3414, 3415, and 3424 or FINE-BFA TRM: FINE 3434 and 3438

FINE 4435 - Nudge: Behavioral Design 1 (3 Credits)
A studio course where students learn to develop 'nudge' solutions through the use of behavioral methods and theories. A 'nudge' is an attempt to influence people's choices and behavior in a predictable way without limiting their options or significantly changing incentives. Through field trips and observation, students will gain knowledge and skills in the field of behavioral design, including dual cognitive processing, choice architecture, behavioral mapping, and cognitive biases. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 4446 - Visualization & Infographics (3 Credits)
In our data and information-rich society, visual representations of data can be useful for making sense of available information and fostering understanding. This course engages students in critique existing work and encourages a thoughtful design process toward creation of information graphics and simple data/information visualizations. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 3015/1015 or FINE-BFA DIG and FINE 3444 or FINE-BFA SMD and FINE 2030, 3444, BIOL 2061 and BIOL 2081 or FINE-BFA ANI: FINE 1820, 2810, and 2830
Typically Offered: Fall.

FINE 4447 - Presenting Science (3 Credits)
Sophisticated graphical components can help a viewing audience understand complex scientific information more clearly. This project-based learning course engages students in creation of thoughtful graphic explanations of science for the purpose of enhancing scientific presentations and audience comprehension. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 4448 - BioMedical 3D Animation (3 Credits)
3D Animation can be a powerful tool for telling stories rooted in science and medicine. This course provides opportunity to learn from existing animated works while honing skills in storyboarding, narrative and 3D animation with focus on biology, science, and health education. SMD students explore and research BFA thesis topics. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE-BFA SMD + FINE 3434, 4020 and 4446 Prereq: FiNE-BFA DIG + FINE 3434 and 3444

FINE 4450 - Social Engagement by Design (3-6 Credits)
Through lectures, discussions and conducting onsite research in international settings, students will become familiar with professional practitioners' Perspectives and experiences in the field of socially engaged design while interrogating current practices, policies, and expectations that inform community engagement and by Design. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 4480 - Design Thesis Research (3 Credits)
Through lectures, studio visits and research, students will engage the profession and examine the role of the artist as a designer. Projects will focus on resumes, interview techniques, portfolio and business practices to prepare students for entering the design profession. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4400 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Fall.

FINE 4495 - Design Thesis Project (3 Credits)
Through critique, research, and writing students will critically explore a thesis topic and develop professional quality visual solutions. Students will create work that expresses their personal artistic vision in relation to significant contemporary and historical artists and practice. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 4480. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4480 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Spring.

FINE 4505 - Sculptural Drawing (3 Credits)
Students apply traditional and mixed media drawing skills, photography and digital reproduction to depict the sculptural object in two and three-dimensional space. Students learn to construct small-scale models and develop sculpture proposals. Drawing as sculpture medium is explored. FINE BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500.
Typically Offered: Spring.

FINE 4515 - Advanced Art Practices (3 Credits)
Students in this course develop a body of work that expresses complex individual vision across media. Students learn to develop their artistic practice with self-directed processes in support of focused concepts in multiple studio areas. Prereq: FINE 1100, FINE 1500, FINE 2200. Coreq: FINE 4950 (BFA Art Practices students only). Restriction: Restricted to undergraduate students with sophomore standing or higher. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 1100, FINE 1500, FINE 2200. Coreq: FINE 4950 (BFA Art Practices students only). Restriction: Restricted to undergraduate students with sophomore standing or higher.
Typically Offered: Fall, Spring.

FINE 4522 - Interdisciplinary Art in Ireland (6 Credits)
The interdisciplinary course introduces students to the methods and concepts of contemporary site-specific art as critical theory through lecture and critique and as practice in the rural/urban landscape and studio along Ireland's County Clare coastline in the Burren region. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Global Education Study Abroad.

FINE 4523 - Topics in Art History I: Art Before Modernism (1-3 Credits)
Variable: Art History lecture course pertaining to art before Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4524 - Topics in Art History II: Modern and Contemporary Art (1-3 Credits)
Variable: Art History lecture course pertaining to art since Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4525 - Museum Studies (3 Credits)
A seminar about museums and art galleries as institutions for the preservation and exhibition of cultural materials. Through writing assignments, discussions, site visits, and analysis, students will demonstrate knowledge and critical thinking on the display of art.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4600 - History of Modern Design:Industrial Revolution-Present (3 Credits)
A lecture course involving the history of design from the Industrial Revolution to the present. The course will address the graphic design, typography, architecture, "Decorative arts", and new media from each period/major design movement in that time frame. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4610 - Pre-Columbian Art (3 Credits)
A lecture course on the art and architecture of Mesoamerica and the Andes before the Spanish conquest. Through visual analysis, vocabulary acquisition, discussion, exams, and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Cross-listed with FINE 5610. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4620 - American Art (3 Credits)
A lecture course on the art of the United States from colonial times to World War II. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4630 - History of Latin American Art:1520-1820 (3 Credits)
A lecture course studying Latin American art of 1520-1820, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the arts.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Cross-listed with FINE 5630. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4670 - Greek and Roman Art (3 Credits)
A lecture course on art and architecture from ancient Greece and Rome. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4680 - Art of the Medieval Multiverse (3 Credits)
A lecture course critically examining the art and architecture of an expansively defined medieval world across themes including geographies and peoples, materials, identities and medievalisms. Through close engagement with artworks and texts, students will gain new perspectives on the diversity of medieval art. Prereq: Visual Arts majors: FINE 2600 (Art History Survey I) and FINE 2610 (Art History Survey II) or permission of the instructor. All other students must be of junior or senior standing or have the permission of the instructor. Cross-listed with FINE 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Visual Arts majors: FINE 2600 FINE 2610 or permission of the instructor; all other students must be of junior or senior standing or have the permission of the instructor.
Typically Offered: Fall, Spring.

FINE 4700 - Italian Renaissance Art (3 Credits)
A lecture course about developments in Italian Renaissance art and architecture. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4705 - Northern Renaissance Art (3 Credits)
A lecture course about developments in Northern Renaissance art and architecture. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4710 - Baroque and Rococo Art (3 Credits)
A lecture course on Italy, Spain, France, England, and the Netherlands during the seventeenth and eighteenth centuries. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4712 - Applied Digital Media (1-3 Credits)
This lab course provides students with the opportunity to execute practical applications in the use of digital 3D media for commercial and/or non-profit venue. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

FINE 4715 - Islamic Art and Architecture (3 Credits)
A lecture course on art and architecture of the Islamic world from the emergence of Islam in the 7th century to c. 1850. Students will engage in visual and contextual analyses, object-based research, and vocabulary acquisition. Prereq: Visual Arts Majors (FINE-BFA) - FINE 2610 with a C or higher. All other students must be of junior standing, or have permission of the instructor to enroll. FINE 2610 with a C or higher. All other students must be of junior standing or have permission of the instructor to enroll. Cross-listed with FINE 5715. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE BFA: FINE 2610 with a C or higher. All other students must be of junior standing or have permission of the instructor to enroll.
Typically Offered: Fall.

FINE 4730 - Arts of Japan (3 Credits)
A lecture course on selected themes and periods in Japanese art. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4750 - Arts of China (3 Credits)
A lecture course on selected themes and periods in the arts and architecture of China. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4770 - Art of India and Southeast Asia (3 Credits)
A lecture course on selected themes and periods in the arts of India and Southeast Asia. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4790 - Methods in Art History (3 Credits)
A seminar about the various research methodologies in the history of art. Through reading, discussion, research,writing assignments, and presentations, students will demonstrate knowledge of art historiography. Prereq: FINE-BA: FINE 2600 and FINE 2610; ENGL 2070 or ENGL 3084 or ENGL 4180 or ENGL 4280. Prereq: FINE-BFA: FINE 2600 and FINE 2610. All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BA: FINE 2600 and FINE 2610; ENGL 2070 or ENGL 3084 or ENGL 4180 or ENGL 4280. Prereq: FINE-BFA: FINE 2600 and FINE 2610. All other students must be at junior- or senior-level standing.
Typically Offered: Fall.

FINE 4825 - Architectural Visualization (3 Credits)
A lecture/lab course covering the 3D visualization of architectural projects. Students will develop skills/ knowledge about the techniques for creating realistic 3D models, texturing, lighting, and presentation. Special emphasis will be placed creating realism in modeling, materials, lighting, and professional renderings. Prereq: FINE 1820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1820

FINE 4840 - Independent Study: FINE (1-3 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 4950 - Studio BFA Thesis (3 Credits)
Studio: BFA Thesis involves the preparation, exhibition and critical faculty response to students' Creative work. Course work focuses on contemporary trends in the arts, the commerce of the arts and the professional practices necessary to an artist' Self-promotion. Coreq: FINE 4515 (BFA Art Practices students only). Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Coreq: FINE 4515 (BFA Art Practices students only).

FINE 4951 - Bachelor of Art Thesis (3 Credits)
A seminar that emphasizes creative and original research through the composition of a substantial paper on a topic in art history. Through discussion, presentations, and individual readings, students will demonstrate skills in research, writing, and critical thinking. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 4790 Restriction: Restricted to FINE-BA majors with a sub-plan of ART within the College of Arts and Media.

FINE 4970 - Modernist Art (3 Credits)
A lecture course about developments in Modernist art and architecture from the late 18th century to 1960. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of the period's historical developments and an ability to analyze its art. Prereq: FINE 2600 and FINE 2610 for FINE-BA and FINE-BFA majors ONLY. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4980 - Gender in Contemporary Art (3 Credits)
This lecture course will address ways in which gender issues have affected the creation and study of visual arts since the early 20th century, with an emphasis on art and culture since World War II. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.
Typically Offered: Fall, Spring.

FINE 4981 - History of Tattoos and Body Art (3 Credits)
From prehistoric traditions to modern revivals, tattooing has proved to be an enduring feature of artistic practice. The seminar will analyze examples of tattoos from different cultures and contexts, so as to understand the variety in form and function. Prereq: FINE 2600: Art History Survey I and FINE 2610: Art History Survey II. Cross-listed with FINE 5981. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2600 and FINE 2610.

FINE 4990 - Contemporary Art: 1960 to Present (3 Credits)
A lecture course about developments in art and architecture since 1960. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4993 - Topics Seminar in Art History I: Art before Modernism (3 Credits)
Variable: Art History seminar pertaining to art before Modernism. Prereq: FINE 2610 for FINE-BA and FINE-BFA majors ONLY. Restriction: All other students must be at junior- or senior-level standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq FINE-BFA/FINE-BA: FINE 2610

FINE 4994 - Topics Seminar in Art History II: Modern and Contemporary Art (3 Credits)
Variable: Art History seminar pertaining to Modern and contemporary art. Prereq: FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq FINE-BFA/FINE-BA: FINE 2610

FINE 4995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

3D Graphics and Animation Emphasis, BFA

Introduction

Please click here (p. 263) to see general Visual Arts information.

The 3D graphics and animation emphasis is a competitive and rigorous four-year curriculum focused on preparing students to work in a wide variety of fields that use animated digital computer graphics (CG), including entertainment, film and television, gaming, medicine, and science.

Program Delivery

- This is an on-campus program.
- The 3D graphics and animation emphasis courses (DACD 2810-4820 below) are billed at a different rate than the standard course tuition due to the state-of-the-art technology used in the classroom. For more information regarding this rate, contact the College of Arts & Media at CAM@ucdenver.edu.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Students who are applying for entrance into the 3D graphics and animation emphasis must submit a portfolio, as described below. The 3D graphics and animation emphasis accepts applications only once per year. Students who meet the requirements and are accepted will be able to register for advanced 3D animation courses.

Eligibility

Students are eligible to apply to the 3D graphics and animation emphasis after completing the following courses with a grade of C (2.0) or better each and a minimum overall animation course GPA of 2.8:

- FINE 1810 Digital 3D Foundations
- FINE 1820 Animation Foundations

Please note that FINE 1810 Digital 3D Foundations and FINE 1820 Animation Foundations are billed at regular tuition rates.

Portfolio Application Requirements

The student's application must be submitted electronically no later than the **Friday after Finals Week in May**. Detailed instructions are provided during the spring semester in FINE 1820 Animation Foundations. Selection for entrance into the 3D graphics and animation emphasis is a competitive process (by faculty review) that requires:

- Submission by the candidate of a "Portfolio Demo Reel". The reel must include original works from FINE 1810 Digital 3D Foundations and FINE 1820 Animation Foundations as well as representative works created in other visual arts courses completed during the first year of the program. The Portfolio Demo Reel must be turned in as a shareable link to a video sharing website like Vimeo or YouTube. Still work should be a component of the reel and should be on screen for at least 3 seconds but no more than 10 seconds. Name and contact information should appear at the beginning and end of the reel. The reel should not be greater in length than 1.5 minutes.
- A "breakdown sheet" that lists the following: the run time at which the work occurs, and which describes what work is included on the submission reel, and, if collaborative in nature, what aspect of the work shown was created by the applicant. Turn in as a PDF file only please.
- A one- to two-page double-spaced written statement regarding the applicant's aspirations as a productive and contributing member of the 3D graphics and animation cohort and the CG community as a whole. Turn in as a PDF file or in the description of the video.
- Information of where to submit the DAC Portfolio Application will be provided duringFINE 1810 and FINE 1820 Animation Foundations.

Students should show only their best work and show the very best work first. Students should be selective since reels may only be 1.5 minutes long. Music may be included in reels, but will not be considered part of the portfolio.

For more portfolio information, please see the College of Arts & Media 3D graphics and animation website (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/3-d-graphics-animation/) and the Digital Animation Center website, or contact jeremy.d.brown@ucdenver.edu.

Transfer Students

If you are an eligible transfer student, please email contact jeremy.d.brown@ucdenver.edu to arrange your portfolio submission before the deadline on the Friday after Finals Week in May.

If you are a transfer student and transferring into 3D Graphics and Animation after the portfolio submission deadline, please email jeremy.d.brown@ucdenver.edu or michelle.carpenter@ucdenver.edu for information on how to submit your portfolio.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.
3. At least 27 semester hours of visual arts credits (at any level) must be taken at CU Denver.
4. At least 24 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Pre-Portfolio		
Take **all** of the following Pre-Portfolio courses:		
FINE 1810	Digital 3D Foundations	3
FINE 1820	Animation Foundations	3
3D Graphics and Animation Emphasis		

Take **all** of the following 3D Graphics and Animation Emphasis courses (available only to students accepted to emphasis via portfolio review):		
DACD 2810	DAC: Modeling 1	3
DACD 2820	DAC: Surfacing and Lighting 1	3
FINE 2822	Digital Cinematography	3
DACD 2830	DAC: Surfacing and Lighting 2	3
or DACD 2850	DAC: Modeling 2	
FINE 3841	Creating Visual Story - Narrative Techniques and Visual Design	3
DACD 3810	DAC: Production Practices	3
DACD 3820	Animation 1: Introduction to Animation and Rigging	3
DACD 3846	Production I	3
FINE 3850	DAC: Dynamic Simulation	3
or FINE 3845	DAC: Preproduction for Story	
DACD 3830	Advanced Character Animation	3
DACD 4810	Production II	3
DACD 4820	Production III	3
Take **all** of the following courses:		
FINE 1002	International Perspectives through Animation	3
FINE 1100	Drawing I	3
FINE 1500	Three-Dimensional Design	3
FINE 2155	Introduction to Digital Photography	3
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
FINE 4990	Contemporary Art: 1960 to Present	3
Or Upper Division Art History Elective		
Take twelve semester hours of Visual Arts Electives. These may include studio, lecture, internship or art history courses.		12
Total Hours		**75**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Art History Minor

Introduction

Please click here (p. 263) to see general Visual Arts information.

The art history minor familiarizes students with the principal traditions of art history and includes a selection of lecture courses in advanced studies. This program provides a strong introduction to historical developments while developing analytical skills in research, writing and visual culture.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Please consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses		
Take **all** of the following Art History Minor courses:		
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
Electives		
Take **nine** semester hours of upper-division (3000/4000-level) Art History electives.		9
Total Hours		**15**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this minor.*

Art History, Fine Arts BA

Introduction

Please click here (p. 263) to see general Visual Arts information.

The art history emphasis familiarizes students with a range of developments in the history of art while developing skills in critical thinking, writing, research and the study of visual culture. After a two-semester introduction to the foundations of art and architectural history, students choose from an array of advanced courses on specific topics. This curriculum concludes with a capstone thesis project.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.
3. At least 21 semester hours of all visual arts credits (at any level) must be taken at CU Denver.
4. At least 21 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Studio Arts		
Take **all** of the following Studio Arts courses:		
FINE ___	2-dimensional Studio Arts course	3
FINE ___	3-dimensional Studio Arts course	3
FINE ___	Studio Arts Elective	3
English		
Take **one** of the following English courses:		3
ENGL 2070	Grammar, Rhetoric and Style	
ENGL 3084	Digital Writing and Storytelling	
ENGL 4180	Argumentation and Logic	
ENGL 4280	Proposal and Grant Writing	
Art History (Entry Level)		
Take **all** of the following Art History courses (entry level):		
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
Electives		
Take a minimum of **three** semester hours of Pre-20th Century Art History elective.		3
Take an additional **twenty-one** semester hours of upper-division (3000/4000-level) Art History electives (seven courses). A minimum **three** of these upper-division elective hours must be an Art History seminar).		21
Art History Capstone		
Take the following Art History Capstone course:		
FINE 4951	Bachelor of Art Thesis	3
Total Hours		**45**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved studio arts courses and art history electives, as well as more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Art Practices Emphasis, BFA

Introduction

Please click here (p. 263) to see general Visual Arts information.

The Art Practices emphasis provides students with a comprehensive education in visual art practices, which includes creative influences, ideas, materials, tools and skills, as well as theory and art history, with an emphasis on current trends in contemporary art. Art Practices is designed for students whose creative ideas move across media and who are looking for a more comprehensive critical approach to developing their practice. Art Practices provides students with focused professional skills in multiple areas of visual art, whereby the student can develop a fully formed body of work with conceptual impact. .

The work of contemporary artists is a dynamic combination of materials, methods, concepts, and subjects that challenges traditional assumptions and definitions. Contemporary artists, art writers and creative thinkers give voice to the varied and changing landscapes of identity, values, and beliefs in the increasingly global culture of our diverse and technologically advancing world. Artists today explore ideas, concepts, questions, and practices that examine the past, describe the present, and imagine the future. This program is designed to address the needs of students looking to become successful emerging artists and creative minds with the skills to become active individuals in the art world through multiple outlets—in exhibition/sales routes, arts education, art writing, curation, business employment and much more.

Students gain professional skills in the studio arts, including painting, drawing, sculpture, and transmedia (digital art, video, performance, concept a socially conscious work). Students then select a secondary concentration that allows them to further focus their personal interests with their work. These selections include Photography, Illustration, and Art History.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum letter grade is required for each course in the major for the course to satisfy the degree requirement. All grades apply to the major and are averaged to generate the major-specific GPA.
   a. A minimum grade of C (2.0) is required to satisfy degree requirements for any major course taken at CU Denver.
   b. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement, but is calculated in the major GPA.
   c. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.
3. At least 27 semester hours of visual arts credits (at any level) must be taken at CU Denver.
4. At least 24 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Arts Foundation		
Take **all** of the following Arts Foundation courses: [1]		
FINE 1100	Drawing I	3
FINE 1400	Two Dimensional Design	3
FINE 1500	Three-Dimensional Design	3
FINE 2155	Introduction to Digital Photography	3
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
Primary Visual Arts Concentration Courses		
Take **all** of the Main Studio Concentration courses from **one** of the following categories: [1]		24
Art Practices: Painting, Drawing, Transmedia Sculpture (p.)		
Secondary Concentration Courses		
Students must take five courses in a second area or discipline, choosing **one** of those listed below: [2]		15
Art History (p.)		
Illustration (p. 283) [3]		
Photography (p. 283)		
Additional Required Courses		
FINE 4990	Contemporary Art: 1960 to Present	3
Electives		
Take **three semester hours** of upper-division Art History elective.		3
Take **nine semester hours** of Visual Arts electives. [4]		9
Capstone Courses		
FINE 4515	Advanced Art Practices	3
FINE 4950	Studio BFA Thesis	3
Total Hours		**78**

[1] Note: Students should choose a Primary and Secondary concentration before continuing with upper-division (3000/4000-level) studio courses. Any 1000/2000-level course may be taken prior to making concentration selections.

[2] Note that the Secondary Concentration must be different from the Primary Concentration.

[3] Note: Students wishing to select Illustration as a secondary concentration area must participate in the Illustration Portfolio Day. For more information, please click here (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/portfolio-reviews/).

[4] These may include studio, lecture, internship or art history courses.

Primary Visual Arts Concentration

Take all of the following Primary Visual Arts Concentration courses:

Art Practices

Code	Title	Hours
FINE 2030	Life Drawing	3
FINE 2500	Beginning Foundry	3
FINE 2510	Shaping Materials	3
FINE 3200	Intermediate Painting and Drawing	3
FINE 3500	Installation Art	3
FINE 3510	Form and Play	3
FINE 3556	Concepts in Studio Art	3
FINE 4505	Sculptural Drawing	3

Secondary Concentrations

Take **all** of the Secondary Concentration courses from **one** of the following categories (Art History, Illustration or Photography).

Art History

Code	Title	Hours
FINE 4525	Museum Studies	3
Six *credits of Art History Elective*		*6*
Six *credits of Art History Seminar*		*6*

Illustration

Code	Title	Hours
FINE 3010	Illustration I: Image Making	3
FINE 3014	The Graphic Novel Workshop	3
FINE 3030	Media of Drawing	3
FINE 3410	Illustration II: Digital Media	3
FINE 3450	Digital Painting	3

Photography

Code	Title	Hours
FINE 1150	Introduction to Darkroom Photography	3
FINE 3161	The Silver Fine Print	3
FINE 3162	The Digital Fine Print	3
FINE 3171	Concepts and Processes in Photography	3
FINE 4195	Advanced Photography I	3

Note that the FINE 3556 Concepts in Studio Art course encompass rotating course topics and can be taken up to four times, with a different topic.

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Art Practices Minor

Introduction

Please click here (p. 263) to see general Visual Arts information.

This minor in art practices offers students the opportunity to explore creative studio practice in multiple studio art areas (e.g., transmedia sculpture, painting, drawing and interdisciplinary art).

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses		
Take **two** of the following Painting and Drawing courses:		6
FINE 1100	Drawing I	
FINE 2030	Life Drawing	
FINE 2200	Painting I	
FINE 3200	Intermediate Painting and Drawing	
Take **two** of the following Transmedia Sculpture courses:		6
FINE 1500	Three-Dimensional Design	
FINE 2500	Beginning Foundry	
FINE 2510	Shaping Materials	
FINE 3510	Form and Play	
Take **two** of the following Interdisciplinary Arts courses:		6
FINE 3500	Installation Art	
FINE 3556	Concepts in Studio Art	
FINE 4215	Interdisciplinary Studio	
FINE 4505	Sculptural Drawing	
Total Hours		**18**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, prerequisite updates and for lists of approved electives and more information about this minor.*

Digital Design Emphasis, BFA

Introduction

Please click here (p. 263) to see general Visual Arts information.

The digital design emphasis integrates aesthetic, creative and critical thought with expertise in electronic media and graphic design. Configured as an interdisciplinary arts and design laboratory, digital design offers a hands-on education combining new art technologies and design research to promote an understanding of the cultural impact and use of digital technology to solve human, social and business problems. Through this interdisciplinary approach combining arts and communication, digital design strives to produce artists and designers who will use technology in innovative ways in both commercial and artistic spheres.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Students who are applying for entrance into the digital design emphasis must submit a portfolio, as described below. The digital design emphasis accepts applications only once a year. Students who meet the requirements and are accepted will be able to register for upper-division digital design courses.

Eligibility

- **Currently enrolled CU Denver students** seeking admission to the BFA Digital Design program who meet the following requirements in the Digital Design Foundation courses (p.) (completed or in the process of completing with a grade of C (2.0) or better in each OR
- You are a **transfer student (not yet enrolled at CU Denver)** seeking admission to the BFA Digital Design program
  - You have completed and are transferring a **minimum of 24 credit hours** from a previous institution AND
  - You have completed or are in the process of completing the Digital Design Foundation courses (p.) with a grade of C (2.0) or better in each

Code	Title	Hours
FINE 1000	Fostering Creativity	3
FINE 2405	Introduction to Digital Design [1]	3
FINE 2415	Typography Studio [1]	3

[1] offered in the fall at CU Denver.

Portfolio Application Requirements

Students applying to the digital design emphasis present a portfolio to be reviewed by design faculty. The deadline for submission will be November 1, 5:00pm (Mountain Time). The portfolio submission must be formatted and presented to the specifications listed on the Portfolio Review page here. There is no fee to apply.

- You do NOT need to submit a portfolio for review if you want to do a Digital Design minor.

Application Instructions & Deadline

The Digital Design Major is a fall-entry program and only accepts applications once per year. The application assignments and specifications can be found on this page (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/portfolio-reviews/).

Properly prepared application submissions must be uploaded to Canvas by **5:00 P.M. Mountain Time on November 1st**. You must have a CU Denver email address to access the Canvas Application portal*. Applications are only accepted online and must be formatted to the specifications listed on the site.

It is recommended to visit the Canvas site early and begin your uploads two weeks before the due date. Late submissions due to technical difficulties on the part of the applicant will NOT be accepted.

*If you are an eligible transfer student, please email your portfolio to travis.vermilye (travis.vermilye@ucdenver.edu)@ucdenver.edu to submit your portfolio by November 1st before the 5:00 P.M. deadline.

If you are a transfer student and transferring into Digital Design after the November 1st deadline, please email michelle.carpenter@ucdenver.edu or travis.vermilye@ucdenver.edu for information on how to submit your portfolio.

Evaluation Process

https://ucdenver.instructure.com/courses/411758/pages/the-evaluation-process

Notification

Notices will be emailed as soon as faculty have reviewed all applications and made their determinations, usually within 2 weeks from the application deadline.

Questions

For general inquiries see the Digital Design Program page here (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/digital-design/).

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.
3. At least 27 semester hours of visual arts credits (at any level) must be taken at CU Denver.
4. At least 24 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Pre-Portfolio		
Take **all** of the following Pre-Portfolio courses:		
FINE 1000	Fostering Creativity	3
FINE 2405	Introduction to Digital Design	3
FINE 2415	Typography Studio	3
Digital Design Emphasis		
Take **all** of the following Digital Design Emphasis courses: [1]		
FINE 3404	Typography II	3
FINE 3414	Motion Design I	3
FINE 3415	Design Studio I	3
FINE 3424	Interactive Media	3
FINE 3444	Interactive Media II	3
FINE 3454	Motion Design II	3
FINE 3464	Design Studio II	3
FINE 4400	Design Studio III	3
FINE 4480	Design Thesis Research	3
FINE 4495	Design Thesis Project	3
Visual Arts		
Take **one** of the following Visual Arts courses:		3
FINE 3434	3D Motion Design	
FINE 4420	Interactive Media III	
Take **all** of the following Visual Arts courses:		
FINE 1100	Drawing I	3
FINE 1500	Three-Dimensional Design	3
FINE 2155	Introduction to Digital Photography	3
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
FINE 4600	History of Modern Design:Industrial Revolution-Present	3
Electives		
Take **three** semester hours of Pre-20th Century Art History elective.		3
Take **twelve** semester hours of Visual Arts electives. [2]		12
Total Hours		**75**

[1] Available only to students accepted to emphasis via portfolio review
[2] These may include studio, lecture, internship, or art history courses.

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Digital Design Minor

Introduction

Please click here (p. 263) to see general Visual Arts information.

The digital design minor integrates creative thinking with experience using digital applications in the production of graphic design and motion graphics. Configured as an interdisciplinary arts and design laboratory, this minor offers a practical understanding of how digital technology can be applied to help solve human, social and business problems.

Program Delivery

- This is an on-campus program

Declaring This Minor

- Students who are declaring a Digital Design minor must complete two introductory Digital Design courses with a grade of C or better, as descried below. Students who meet the requirements will be eligible to register for certain upper-division studio Digital Design courses.

Eligibility

The student has completed, or is in the process of completing, the following courses with a grade of C (2.0) or better in each:

Code	Title	Hours
FINE 2405	Introduction to Digital Design [1]	3
FINE 2415	Typography Studio [1]	3

[1] Offered typically only in the fall term at CU Denver

Questions

- For general inquiries see the Digital design Program page here (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/digital-design/).

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. All courses for this minor must be taken at CU Denver unless approved otherwise by the digital design faculty advisor.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to major requirements.

Code	Title	Hours
Required Courses (Entry Level)		
Take **all** of the following Digital Design Minor courses (entry level):		
FINE 2405	Introduction to Digital Design	3
FINE 2415	Typography Studio	3
Required Courses		
Take **all** of the following Digital Design Minor courses (available only to students after declaring):		
FINE 3414	Motion Design I	3
FINE 3415	Design Studio I	3
FINE 3424	Interactive Media	3
FINE 3434	3D Motion Design	3
FINE 4600	History of Modern Design:Industrial Revolution-Present	3
Total Hours		**21**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and more information about this minor.*

Illustration Emphasis, BFA

Introduction

Please click here (p. 263) to see general Visual Arts information.

The Illustration emphasis integrates fine art, mixed media and digital practices with conceptual thinking, research and storytelling in the production of creative work. As a practice, Illustration focuses on skills and concepts in the professional development of a student's individual vision and approach to illustrative arts. Marketing, business and design practices prepare students to discuss and view their work in a design context and for particular commercial markets and galleries. Courses are taught in state-of-the-art drawing and computer labs using the Adobe software suite alongside hands-on studio facilities. Illustration students gather skills to easily work across multiple artistic media--including design, drawing, painting, printmaking, and 3D media for the development of motion and spatial projects.

Students gain the ability to establish freelance illustration studio practice, as well as multi-faceted professional skills and flexibility in working with designers, creative directors, and art directors. Graduates are prepared to write and illustrate concepts and stories in preparation for studios, and the editorial, publishing and advertising markets.

Students in the illustration emphasis receive instruction in conceptual illustration, digital illustration, rendering, perspective, painting, exhibition preparation, professional practices and the use of various artistic and illustration techniques. In preparation for a professional illustration career, the course work allows students to master numerous essential digital and traditional tools and work to successfully bring the two together in ambitious and innovative illustrative work.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.
- Students who are applying for entrance into the illustration emphasis must submit a portfolio of work for faculty review, as described below. The illustration emphasis accepts applications once a year during the Spring semester. Students who meet the requirements and are accepted go on to take upper-division illustration courses.

Eligibility

The student has completed, or is in the process of completing, the following courses:

Code	Title	Hours
FINE 1100	Drawing I	3
FINE 1400	Two Dimensional Design	3
FINE 1500	Three-Dimensional Design	3
FINE 2020	Drawing II	3
FINE 2155	Introduction to Digital Photography	3
FINE 2200	Painting I	3

A minimum cumulative fine arts/art history GPA of 2.0

Portfolio Review Requirements

Students applying to the illustration emphasis submit a portfolio and unofficial transcript(s) from CU Denver and all previous post-secondary educational institutions via an online submission portal. Portfolios are due April 1st and will be reviewed by Illustration faculty during the first two weeks of April. Portfolios must be formatted and presented according to the specifications listed on the Portfolio Review page (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/portfolio-reviews/). There is no fee to apply.

TRANSFER Students

Transfer students who meet the following requirements may apply.

- You are a Transfer Student (not yet enrolled at CU Denver) seeking admission to the Illustration program
- You have completed, and are transferring, a minimum of twenty-four credit hours from a previous institution.
- You have completed, or are in the process of completing, the equivalents of the following Foundation Studio classes: FINE 1100 - Drawing I, FINE 1400 - Two-Dimensional Design, FINE 1500 - Three-Dimensional Design, FINE 2020 - Drawing II, FINE 2155 - Introduction to Digital Photography, and FINE 2200 - Painting I

If you are an eligible transfer student, please email your portfolio to travis.vermilye@ucdenver. (travis.vermilye@ucdenver.edu)edu to submit your portfolio before the 5:00 P.M. application deadline on April 1st.

notification

Notices will be emailed as soon as faculty have reviewed all applications and made their determinations, usually within 2 weeks from the application deadline.

If you are a transfer student and transferring into Illustration after the April1st deadline, please email michelle.carpenter@ucdenver.edu or travis.vermilye@ucdenver.edu for information on how to submit your portfolio.

Questions

For general inquiries see the Illustration Program page here (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/illustration/). For Portfolio review questions see the Portfolio Review page here (https://artsandmedia.ucdenver.edu/areas-of-study/visual-arts/portfolio-reviews/).

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.

3. At least 27 semester hours of visual arts credits (at any level) must be taken at CU Denver.
4. At least 24 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Pre-Portfolio		
Take **all** of the following Pre-Portfolio courses:		
FINE 1100	Drawing I	3
FINE 1400	Two Dimensional Design	3
FINE 1500	Three-Dimensional Design	3
FINE 2020	Drawing II	3
FINE 2155	Introduction to Digital Photography	3
FINE 2200	Painting I	3
Lower-Division Visual Arts		
Take **one** of the following lower-division Visual Arts courses:		3
FINE 2405	Introduction to Digital Design	
FINE 2406	Introduction to Digital Art & Imaging	
Take **all** of the following lower-division Visual Arts courses:		
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
FINE 2030	Life Drawing	3
FINE 2415	Typography Studio	3
Illustration Emphasis		
Take all of the following Illustration Emphasis courses: [1]		
FINE 3010	Illustration I: Image Making	3
FINE 3410	Illustration II: Digital Media	3
FINE 4000	The Business of Art	3
FINE 4001	Illustration III: Investigative Methods	3
FINE 4002	Illustration IV: Thesis Development	3
Upper-Division Visual Arts		
Take **all** of the following upper-division Visual Arts courses:		
FINE 3014	The Graphic Novel Workshop	3
FINE 3030	Media of Drawing	3
FINE 3450	Digital Painting	3
FINE 4990	Contemporary Art: 1960 to Present	3
Electives		
Take **three** semester hours of Pre-20th Century Art History elective.		3
Take **twelve** semester hours of Visual Arts electives. [2]		12
Capstone		
Take the following Capstone course:		
FINE 4003	Illustration BFA Thesis	3
Total Hours		**78**

[1] To be taken after gaining acceptance to emphasis via portfolio review
[2] These may include studio, lecture, internship or art history courses.

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Illustration Minor

Introduction

Please click here (p. 263) to see general Visual Arts information

The illustration minor is designed for students interested in broadening their visual communication skills and obtaining an introductory understanding of what is involved in the production of client-driven visual work. Undergraduates explore digital as well as hand-produced techniques and gain a basis for combining the two in a seamless manner in rendered illustrative works. This minor allows students to complement their major area of study with professionally effective visual communication skills.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To declare this minor, please see College of Arts & Media Advising and Student Services in Arts Building, 177. Consult the College of Arts & Media at CAM@ucdenver.edu for more information.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses		
Take **all** of the following Illustration Minor courses:		
FINE 1100	Drawing I	3
FINE 1400	Two Dimensional Design	3
FINE 3010	Illustration I: Image Making	3
Take **one** of the following lower-division Visual Arts courses		
FINE 2405	Introduction to Digital Design	3
or FINE 2406	Introduction to Digital Art & Imaging	
Select **two** of the following Illustration Minor electives:		6
FINE 3014	The Graphic Novel Workshop	
FINE 3300	Painting, Drawing and the Printed Image	
FINE 3410	Illustration II: Digital Media	
FINE 3450	Digital Painting	
FINE 4000	The Business of Art	
Total Hours		**18**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for more information about this minor.*

Photography Emphasis, BFA

Introduction

Please click here (p. 263) to see general Visual Arts information.

Students in the photography emphasis develop skills in traditional and digital photography while refining their creative and conceptual approaches to the medium. The photography curriculum emphasizes individual artistic development that integrates the history of photography, critical theory and contemporary practice. Through an exploration of photographic techniques, students are given the tools to create visually compelling images that communicate their artistic ideas.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 211) to go to information about declaring a major.

Questions

For more information, please contact CAM@ucdenver.edu.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Arts & Media Graduation Requirements (p. 210)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
2. All upper-division visual arts courses must be taken at CU Denver unless approved otherwise by Department of Visual Arts faculty.
3. At least 27 semester hours of visual arts credits (at any level) must be taken at CU Denver.
4. At least 24 semester hours of total visual arts courses must be upper-division.

Code	Title	Hours
Foundations		
Take **all** of the following Foundations courses:		
FINE 1100	Drawing I	3
FINE 1150	Introduction to Darkroom Photography	3
FINE 1400	Two Dimensional Design	3
FINE 1500	Three-Dimensional Design	3
FINE 2155	Introduction to Digital Photography	3
FINE 2600	Art History Survey I	3
FINE 2610	Art History Survey II	3
Photography Emphasis		
Take **all** of the following Photography Emphasis courses:		
FINE 3156	Photography Studio and Lighting	3
FINE 3160	Color and the Constructed Image	3
FINE 3161	The Silver Fine Print	3
FINE 3162	The Digital Fine Print	3
FINE 3171	Concepts and Processes in Photography	3
FINE 3172	Photography and Community	3
FINE 4195	Advanced Photography I	3
FINE 4196	Advanced Photography II	3
Visual Arts		
Take **all** of the following Visual Arts courses:		
FINE 3630	History of Photography	3
FINE 3631	Photography: Theory and Criticism	3
FINE 3635	Photography Now	3
FINE 4990	Contemporary Art: 1960 to Present	3
Electives		
Take **three** semester hours of Pre-20th Century Art History elective.		3
Take **three** semester hours of Studio Arts elective in an area outside of photography.		3
Take **nine** semester hours of Studio Arts electives.		9
Take **six** semester hours of Visual Arts electives. [1]		6
Capstone		
Take the following Capstone course:		
FINE 4950	Studio BFA Thesis	3
Total Hours		**81**

[1] These may include studio, lecture, internship or art history courses.

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for lists of approved electives and more information about this emphasis.*

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cam/).

Photography Minor

Introduction

Please click here (p. 263) to see general Visual Arts information.

Students in the photography minor develop a broad range of technical and conceptual skills that expand their knowledge of image-making. The curriculum of the minor emphasizes photography as a tool for creative expression while integrating the history of photography and contemporary artistic practices. Through an exploration of both digital and analog processes, students select intermediate level courses that enable them to successfully employ a variety of photographic strategies.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Students who wish to declare this minor should contact the College of Arts & Media at CAM@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students may transfer up to six semester hours of non-CU Denver courses toward a College of Arts & Media minor. All other courses must be taken at CU Denver.
2. A minimum grade of C (2.0) is required for each course applied toward a College of Arts & Media major, minor or certificate requirement. A grade of C- (1.7) or lower will not fulfill a major, minor or certificate requirement. A grade of S is acceptable only for courses in which the grading basis is S/U. No more than 6 semester hours of P+/P/F is allowed in any given semester. No more than 12 semester hours may be elected as P+/P/F toward the degree.
3. Students may use up to six semester hours to fulfill both major and minor requirements; the remaining semester hours for the minor must be taken in addition to the major requirements.

Code	Title	Hours
Required Courses (Entry Level)		
Take **all** of the following Photography Minor courses (entry level):		
FINE 1150	Introduction to Darkroom Photography	3
FINE 2155	Introduction to Digital Photography	3
FINE 3630	History of Photography	3
Required Courses		
Take **three** of the following Photography Minor courses:		9
FINE 3135	Historic Photographic Processes in Italy	
FINE 3156	Photography Studio and Lighting	
FINE 3160	Color and the Constructed Image	
FINE 3161	The Silver Fine Print	
FINE 3162	The Digital Fine Print	
FINE 3171	Concepts and Processes in Photography	
FINE 3172	Photography and Community	
ARCH 3602	Architecture Photography (available only to architecture majors)	
Total Hours		**18**

Please contact the College of Arts & Media at CAM@ucdenver.edu *for course sequencing, any prerequisite updates and for more information about this minor.*

College of Engineering, Design and Computing

Leadership

Dean

Martin Dunn, Dean

Assistant Dean

Daniel DeLaTorre, Assistant Dean of Finance and Administration

Contact

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North Classroom 3034
1200 Larimer Street, 3rd Floor
Phone: 303-315-7170
Fax: 303-315-7173
Email: engineering@ucdenver.edu
Website: engineering.ucdenver.edu/ (https://engineering.ucdenver.edu/)

Mailing Address
College of Engineering, Design and Computing
Campus Box 104
P.O. Box 173364
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Overview

The College of Engineering, Design and Computing at the University of Colorado Denver provides nationally accredited engineering education programs that serve a diverse population of traditional and non-traditional students. The programs are delivered in a flexible format emphasizing experiential learning, interdisciplinary design, and leveraging of the latest digital tools.

An engineering degree opens the door to a wide range of careers and employment opportunities. The following is a brief summary of the engineering disciplines taught at CU Denver.

Bioengineering offers opportunities for interdisciplinary undergraduate training for a bachelor of science degree and graduate training for master of science and doctor of philosophy degrees. Our programs are uniquely integrated with the CU Anschutz Medical Campus. Students enjoy opportunities to learn from clinicians and engineers and to perform research or medical device design in world-class hospitals and clinical research labs. Bioengineering is one of the fastest growing job markets this decade, according to the Bureau of Labor Statistics. A degree in this area provides numerous opportunities to work in health care, biomedical industry, government regulatory agencies and academia.

Civil engineering offers an interesting and challenging career in the design and construction of buildings, bridges, dams, aqueducts and other structures; in transportation systems including highways, canals, pipelines, airports, rapid transit lines, railroads and harbor facilities; in the distribution of water and the regulation of rivers; in the development of water resources for urban use, industry and land reclamation; in the control of water quality through water purification and proper waste treatment; in the construction and contracting industry; and in the problems concerned with our physical environment and the growth of cities.

Computer science offers graduates the solid foundation needed for jobs in computing and enabling technology encompassing many areas across diverse fields such as healthcare, business, natural & applied sciences, mathematics and visual arts. Career paths in computer science involve designing and implementing software, devising new computer applications and developing effective ways to solve computing problems.

Construction engineering and management enables engineers, construction managers, architects, business majors and others to advance within a wide variety of construction career paths or to transition into the dynamic, exciting and high paying building industry. Graduates will find exciting, well-paid careers in the expanding and interconnected industry of architecture, engineering and construction as it embraces dynamic new concepts like smart cities, connected infrastructure and evolving value propositions.

Electrical engineering offers careers that include research in development of new electrical or electronic devices, instruments or products; design of equipment or systems; production and quality control of electrical products; and sales or management for private industry or government. There are numerous specialties within electrical engineering. Among them are the design and application of computer systems and digital engineering; electromagnetic fields and microwave devices; control systems; communication theory and signal processing; electrical integrated circuits and electron devices; and energy and power systems.

Mechanical engineering offers a wide range of interesting and challenging career opportunities in research, design, development, manufacturing, testing and marketing for either private industry or government. Mechanical engineers help develop a wide range of products such as engines, transmissions, compressors, pumps, oil field drilling rigs, missiles, space satellites, earth-moving equipment, container-manufacturing machines, medical equipment and many other products encountered in daily life.

Educational Goals

The College of Engineering, Design and Computing has established the following goals and objectives for undergraduate education:

- successful completion of the fundamental core courses, primarily lower division, in mathematics and the physical sciences
- successful completion of the required upper-division courses in engineering science, analysis and design
- successful completion of real-world engineering design projects that require integration of engineering, economic and social skills
- successful completion of a series of humanities and social science courses that introduce the student to societal problems and historical perspectives
- evidence, through close student/faculty contact, of development of professionalism, ethics and concern for the multifaceted human element of engineering
- evidence, from successful completion of a full engineering curriculum, of the ability to maintain professional competency through lifelong learning
- evidence, through successful completion of a series of communications-oriented courses and project presentations, of an ability to communicate effectively with professionals and laypersons alike

Accreditation

Our undergraduate programs in bioengineering, civil engineering, electrical engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org (http://www.abet.org). The undergraduate program in computer science is accredited by the Computing Accreditation Commission of ABET, www.abet.org (http://www.abet.org).

Freshman Year

Fundamentals taught in the freshman year are of critical importance in the more advanced classes. Special attention should be given to taking courses in the proper sequence. (Course requirements for freshmen are detailed in the typical curriculum given under each department.) All students are urged to consult their instructors whenever they are experiencing difficulties with course materials or for questions related to the class.

Internships

Internships are a way for students to gain professional experience while studying at CU Denver. Many internship positions lead to permanent employment opportunities upon graduation. Please contact the Experiential Learning Center at 303-315-7258 for information on the specific eligibility requirements.

Scholarships

The College of Engineering, Design and Computing awards various undergraduate scholarships to support the education of engineering students. These awards are provided through funds generously given by industry, alumni and other donors. Once admitted, students may view and apply for these scholarships through the student portal (https://passport.ucdenver.edu/login.php). Please note that the list of scholarships for which a particular student is eligible automatically populates. For additional information on other types of financial aid, consult the Tuition/Financial Aid FAQs section (p. 50).

College of Engineering, Design and Computing Admissions Information

Freshman Applicants

Students with fewer than 24 completed college credits at the time of application are evaluated as first-time freshmen.

Direct Admission to a Bachelor of Science* Program:

- Minimum 3.0 cumulative high school GPA

*See below for bachelor of science in Construction Management and bachelor of science in Cybersecurity criteria.

Direct Admission to:

BA in Computer Science
BS in Construction Management
BS in Cybersecurity

- Minimum 2.5 cumulative high school GPA

Admission to Pre-Engineering

Students who do not meet the criteria for direct admission to a major will be considered for admission to pre-engineering with a major interest.

- Minimum 2.5 cumulative high school GPA

Admission to College of Liberal Arts and Sciences - Undeclared

- Students who do not meet the criteria for direct admission to a major or pre-engineering, but otherwise meet the university's admission criteria, will be admitted to the College of Liberal Arts and Sciences as an undeclared major. These students should speak with their advisor to discuss the requirements to transfer into the College of Engineering, Design and Computing.

For International Students Who Did Not Graduate From a U.S. High School

The ACT/SAT requirement is waived; instead, students must meet the minimum cumulative high school GPA requirement above and have completed three (3) years of high school math with a cumulative 2.7 GPA in math courses.

Transfer Applicants

For direct admission to the College of Engineering, Design and Computing, transfer applicants must meet the following criteria:

DIRECT ADMISSION TO:

BS in Bioengineering
BS in Civil Engineering
BS in Construction Engineering and Management
BS in Computer Science
BS in Electrical Engineering
BS in Mechanical Engineering

Criteria:

- Minimum 3.0 overall GPA with a grade of B- or better in Calculus I **or**
- Minimum 2.75 overall GPA **and** a minimum 2.5 GPA (based on most recent course attempts) in Calculus I, Calculus II, and Calculus-based Physics I with corresponding lab, with a grade of C- or better in each course.

NOTE: For admission into the computer science major, calculus-based Physics I is not required, but will be accepted

DIRECT ADMISSION TO:

BA in Computer Science
BS in Construction Management

Criteria:

- Minimum 2.5 overall GPA
- Completion of at least one of the following courses with a grade of C or better: College Algebra, College Trigonometry, Pre-Calculus, Calculus I, or Calculus II

ADMISSION TO PRE-ENGINEERING

Students who do not meet the criteria for direct admission to a major will be considered for admission to pre-engineering with a major interest.

Criteria:

- Minimum 2.5 overall GPA
- Completion of at least one of the following courses with a grade of C or better: College Algebra, College Trigonometry, Pre-Calculus, Calculus I, or Calculus II

ADMISSION TO COLLEGE OF LIBERAL ARTS AND SCIENCES - UNDECLARED

- Transfer students who do not meet the criteria for direct admission to a major or pre-engineering, but otherwise meet the university's admission criteria, will be admitted to the College of Liberal Arts and Sciences as an undeclared major, or in the case of an IUT, remain in their current CU Denver school or college. These students should speak with their advisor to discuss the requirements to transfer into the College of Engineering, Design and Computing.

Application Deadlines

UNDERGRADUATE

Fall: July 31
Spring: December 31
Summer: May 31

Please visit the College of Engineering, Design and Computing undergraduate admissions website (https://engineering.ucdenver.edu/undergraduate-programs/admissions/) for additional information.

(For Graduate Programs and information please refer to the Graduate **(**http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-engineering-design-computing/#departmentstext**) catalog.)**

College of Engineering, Design and Computing Departments and Programs

- Bioengineering (p. 299)
  - Bioengineering, BS (p. 304)
- Civil Engineering (p. 307)
  - Civil Engineering, BS (p. 314)
  - Construction Engineering and Management, BS (p. 316)
  - Construction Management, BS (p. 320)
  - Construction Management Minor (p. 322)
- Computer Science and Engineering (p. 323)
  - Computer Science, BA (p. 338)
  - Computer Science, BS (p. 340)
  - Computer Science Minor (p. 342)
  - Cybersecurity, BS (p. 343)
  - Cybersecurity and Secure Computing Undergraduate Certificate (p. 346)
- Electrical Engineering (p. 347)
  - Electrical Engineering, BS (p. 354)
  - Computer Engineering Minor (p. 356)
  - Electrical Engineering Minor (p. 357)
- Inworks (p. 358)
  - Human-Centered Design and Innovation Minor (p. 361)
  - Human-Centered Design and Innovation Undergraduate Certificate (p. 362)
- Mechanical Engineering (p. 363)
  - Mechanical Engineering, BS (p. 370)

College of Engineering, Design and Computing Graduation Requirements

For additional information regarding graduation policies and procedures, please visit the Graduation section of the catalog.

Hours

A minimum of 130 semester hours is required for the bachelor of science (BS) in civil engineering.

A minimum of 128 semester hours is required for the BS in bioengineering, computer science, construction engineering and management, electrical engineering, and mechanical engineering.

A minimum of 120 credit hours is required for the BS in construction management and the bachelor of arts (BA) in computer science.

Grade Point Average (GPA)

A minimum cumulative GPA of 2.0 is required for all courses attempted, for all required courses and for all courses taken within the student's major department.

Hours in Residence

At least 30 semester hours of course work applicable to an undergraduate degree in engineering must be taken at CU Denver while a declared student in good standing at the College of Engineering, Design and Computing. Students must be enrolled in the college for at least the final two semesters prior to graduation.

Note: The electrical engineering program requires at least 40 hours of course work applicable to a bachelor of science degree in electrical engineering, which must be taken at CU Denver while a declared student in good standing at the College of Engineering, Design and Computing.

Major

Complete all requirements associated with your individual major. Please visit the individual program pages for major requirements.

Applying for Graduation

When a student in the College of Engineering, Design and Computing is within 30 hours of completing their degree, an appointment should be scheduled with an advisor to perform a 30-hour check. The 30-hour check is required before the student may graduate.

In addition to the above requirement, all students in the College of Engineering, Design and Computing must also meet with their advisor in the semester prior to the semester in which they wish to apply for graduation to ensure all academic and administrative requirements are met. Failure to do so may interfere with a student's ability to graduate.

It is the sole responsibility of the student to understand and follow the policies, procedures, dates and deadlines of the CU Denver campus and the College of Engineering, Design and Computing. Failure to do so may obstruct a student's ability to graduate.

Academic Honors

In recognition of superior scholarship, academic honors are awarded at the time of graduation based on the cumulative University of Colorado undergraduate GPA, including the final semester of coursework. To be eligible for honors, a student must have completed a minimum of 60 semester hours at the University of Colorado (on any CU campus). Grades earned at institutions outside of the CU system will not be considered. For Special Honors, a student must have earned a cumulative CU GPA of at least 3.800; for Honors, a GPA between 3.600 and 3.799

is required. Since grades earned during the semester of graduation are considered, academic honors are notated in the commencement program as "pending" and are officially recorded on the diploma and transcript if granted.

College of Engineering, Design and Computing Academic Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

Undergraduates Taking Graduate Coursework

With advisor approval, an undergraduate engineering student may be granted the opportunity to take graduate courses to be counted toward an undergraduate degree. For all College of Engineering, Design and Computing students, semester hours of graduate-level University of Colorado course work taken as an undergraduate can be considered for credit toward a graduate degree. Depending on the program of study, between 6 and 12 credits of graduate-level coursework taken as an undergraduate may count toward a graduate degree. Only a grade of B (3.000) or above will be considered for graduate-level credit. All consideration of graduate work to be counted toward both an undergraduate and a graduate degree must be approved by an advisor.

Course Load/Restriction

Undergraduate students employed less than 10 hours per week should consider registering for courses as outlined in the departmental curricula. Additional courses may be allowed when there is satisfactory evidence that the student has the capability to handle the added load. Permission to take more than 19 hours may be granted by written petition and approval of the department chair and the dean's office.

How to Declare or Change a Major or Minor

Students enrolled in the College of Engineering, Design and Computing who wish to change to another department within the college must apply for transfer by submitting a change of major form for undergraduate degree students, which can be found on the college website (http://engineering.ucdenver.edu) under > Policies and Forms. This form requires the approval of the new department.

Pre-engineering students who are eligible for admission to an engineering major should consult their advisor prior to submitting the change of major form.

Students enrolled in another school/college who wish to transfer into the College of Engineering, Design and Computing, must complete the Intra-University Transfer (IUT) (https://www.ucdenver.edu/docs/librariesprovider234/student-resources/iutform.pdf?sfvrsn=47fa1db9_4) form. This form is submitted electronically to the appropriate department.

Those approved for an IUT will be admitted into the engineering program. Students who are not directly admitted to their program will be automatically considered for pre-engineering. Admission to Pre-Engineering does not guarantee admission to the major.

- a 2.750 (or higher) cumulative CU Denver GPA
- a 2.500 (or higher) GPA in Calculus I, Calculus II, and Calculus-based Physics I and the corresponding lab and no lower than a C- in any one of these courses.
- IUT guidelines are subject to change. Students are encouraged to meet with an engineering advisor to discuss the IUT process prior to submitting a request.

Registration for Non-Degree Seeking Students

Non-degree students may apply 12 semester hours of course work (or up to 18 if taken in one semester) toward a bachelor's degree in engineering from CU Denver. Non-degree graduate students may apply 9 semester hours of graduate-level course work toward a master's degree in engineering from CU Denver.

Withdrawal

After the tenth week of the semester, dropping a course requires a petition signed by the department chair. Only under very extenuating circumstances, such as a documented medical or personal emergency, will petitions for dropping courses be approved after the tenth week of the semester.

Retroactive Drop/Withdrawal

The university specifies the date up to which students may drop a course using the online course registration and schedule adjustment system. This date usually occurs at the end of the first week of classes for that semester. After this date, students must use a Schedule Adjustment Form to add or drop courses from their schedules. This form requires the signature of the course instructor. Beyond the end of the tenth week of the semester, this form also requires the signature of the department advisor in which the student is majoring. The student's department will verify that the course being dropped is not a co-requisite to another course in which the student is enrolled that semester. If so, then the other course must also be dropped. A course withdrawal after the tenth week of the semester is at the discretion of the instructor and the student's department, and signatures must be obtained from both. No course withdrawals will be approved after the end of the 14th week of the semester for any reason except unforeseen circumstances beyond the student's control.

A complete withdrawal from the semester requires the same Schedule Adjustment Form, but it only requires the signature of the dean of the student's college and the Financial Aid Office, if applicable.

Note: The student is responsible for informing the university offices of any change in schedule that may affect enrollment requirements for matters such as financial aid, scholarships, or international visas.

Grade Appeals

Final grades, as reported by instructors, are to be considered permanent and final. Grade changes will be considered only in cases of documented clerical error and must be approved by the chair.

Special Grading Options

The primary purpose for offering courses on a P+/P/F grade basis is to encourage students, especially juniors and seniors, to broaden their educational experience by electing challenging upper-division humanities and social sciences elective courses without serious risk to their

academic records. In general, P+/P/F should be limited to 3000- or 4000-level humanities and social sciences courses. Students must submit the Pass+/Pass/Fail form within the posted deadlines. A maximum of 16 semester hours may be taken P+/P/F or S/U, including courses taken in the honors program.

No courses required for the completion of an engineering degree will be accepted for credit if taken with the university standard P+/P/F process. This includes all required and elective BIOL, CHEM, ENGR, MATH, and PHYS courses and any College of Engineering, Design and Computing discipline course (BIOE, CSCI, CVEN, CEMT, ELEC, and MECH). CU Denver core curriculum courses may be eligible, BUT because certain categories of core courses are not eligible (e.g., math and natural and physical sciences), students are strongly recommended to consult their advisor prior to requesting this grading option. If a student selects P+/P/F grading for an ineligible course, the student will be required to repeat it for a letter grade to satisfy degree requirements.

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

No Credit

An engineering student must request approval before enrolling for no credit (NC) for any course. Required courses must be taken for credit. Once a course has been taken NC, the course cannot be repeated for credit.

Incomplete Grade

An incomplete may be given by the instructor for circumstances beyond the student's control, such as a documented medical or personal emergency. When it is given, the student and the departmental office must be informed in writing, by the instructor, what the student is expected to do in order to remove the incomplete grade as well as the date by which the tasks are to be completed. The instructor will assign an "I" distinction. The student is expected to complete the course requirements (e.g., the final examination or term paper), within the established deadline and not to retake the entire course. The majority of course requirements (75%) must have been completed with a passing grade to be eligible for an incomplete. An "I" distinction will be converted automatically to a grade of F after one year if the specified work is not completed.

It is the student's responsibility to ensure that all courses marked as incomplete are officially completed before the tenth week of the student's final semester in school.

Attendance Policy

Successful work in the College of Engineering, Design and Computing is dependent upon regular attendance in all classes. Students who are absent should make arrangements with instructors to make up the work missed. Students who for illness or other good reason miss any examination must notify the instructor no later than the end of the day on which the examination is given. Failure to do so may result in an F in the course.

Course Repeat Policy

Undergraduate students may not register for credit in a course in which they already have received a grade of C- or higher. For required courses (including technical electives): an F grade necessitates subsequent satisfactory completion of the course; students must repeat a prerequisite course in which a grade of D+ or lower was earned before moving on to the subsequent course.

If students do not successfully complete (C- or higher) an engineering class on the second attempt, they must obtain written approval from their major department to enroll for the course for the third time. When a course is retaken because of a D or F grade, both grades will appear on the transcript and both will be averaged into the GPA. Any exceptions to these policies must be made by written petition through the Office of the Dean.

Academic Integrity and Discipline Policies

CU Denver Campus Policy 7050, Academic Integrity (https://www.ucdenver.edu/faculty_staff/employees/policies/Policies%20Library/7XXX%20Student%20Affairs/7050%20-%20Academic%20Integrity.pdf), defines academic misconduct and sets forth a uniform process for handling allegations of student academic misconduct at CU Denver. As members of the CU Denver community, students are expected to know, understand, and comply with the standards of the University and to accept the responsibility to maintain the highest standards of intellectual honesty and ethical conduct in completing all forms of academic work at the university. In particular, students must refrain from academic misconduct, defined in the policy as

1. a student's use of unauthorized assistance with intent to deceive an instructor or other person who is assigned to evaluate the student's work in meeting course and degree requirements, or
2. actions that interfere with the ability of the instructor to fairly judge the work of the student or other students.

Academic integrity standards assist in promoting an academically sound, fair, and respectful community. CU Denver views the Academic Integrity process set forth in this policy as a learning experience that can result in growth and personal understanding of one's responsibilities and privileges within both the CU Denver community and the greater community. All students must adhere to these standards. Students who allegedly violate these standards and commit academic misconduct will be subject to the procedures described in this policy. Academic dishonesty is academic in nature, and students are encouraged to contact their academic advisor for details of the campus policy and procedures centered on the academic integrity policy.

Forms of Academic Dishonesty (Refer to Campus Policy 7050 for more detailed definition)

Students are expected to know, understand and comply with the ethical standards of the university. Examples of academic dishonesty include, but are not limited to the following:

1. *Plagiarism*

   Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. The incorporation of another person's work into one's own requires appropriate identification, regardless of the means of appropriation.
2. *Cheating*

Cheating involves the possession, communication or use of information, materials, notes, study aids or other devices not authorized by the instructor in an academic exercise or communication with another person during such an exercise for the purpose of obtaining or providing unauthorized information or materials.

3. *Fabrication and Falsification*

   Fabrication involves inventing or counterfeiting information, i.e., creating results not obtained in a study or laboratory experiment. Falsification, on the other hand, involves the deliberate alteration or changing of results to suit one's needs in an experiment or other academic or creative exercises.

4. *Multiple Submissions*

   This is the submission of academic work for which academic credit has already been earned, when such submission is made without instructor authorization.

5. *Misuse of Academic Materials*

   The misuse of academic materials includes but is not limited to the following: stealing or destroying library or reference materials, computer programs, another student's notes or materials or illegitimate possession of examination materials, forgery, and falsification of university documents.

6. *Complicity in Academic Dishonesty*

   Complicity involves knowingly allowing or contributing to another's academic misconduct.

School/College Specific Policy

COLLEGE OF ENGINEERING, DESIGN AND COMPUTING

Students are expected to conduct themselves in accordance with the highest standards of honesty and integrity. Cheating, plagiarism, illegitimate possession and disposition of examinations, alteration, forgery or falsification of official records and similar acts or attempts to engage in such acts are grounds for suspension or expulsion from the university.

In particular, students are advised that plagiarism consists of any act involving the offering of the work of someone else as the student's own.

The college has a Student Honor Code that all students are required to sign when they meet with their academic advisor. The code outlines the college's expectations of its students and faculty in establishing and maintaining the highest standards in academic work and is available on the college website (http://engineering.ucdenver.edu (http://engineering.ucdenver.edu/)) under Student Services > Policies and Forms.

The college also has a committee on discipline that hears cases of alleged violations of academic ethics and recommends disciplinary action. In a case of proven academic dishonesty/misconduct, the committee may invoke penalties that may include probation, suspension or expulsion. In a case of suspension or expulsion, a distinction may be placed on a student's academic record indicating the action was due to academic dishonesty/misconduct. Students who suspect or observe violations of academic ethics should report them to their instructor, the department chair or the Office of the Dean.

In addition, there is a student Academic Honor Code at CU Denver. The code is published in a brochure available from the Office of Student Life. Information regarding all student grievance procedures may be obtained in that office.

Bioengineering

Chair: Kristyn Masters
Denver Office:
Anschutz Office: Bioscience 2, 12705 E. Montview Blvd, Suite 100
Telephone: 3030-724-4196
Fax: 303-724-5800
E-mail: bioengineering@ucdenver.edu
Website: engineering.ucdenver.edu/bioengineering (https://engineering.ucdenver.edu/academics/departments/bioengineering/)

Overview

The Department of Bioengineering bridges engineering and medicine with a core mission of applying engineering principles and analyses to improving human health. The department will fulfill this mission by providing opportunities for training, research, and service in bioengineering to faculty, students, and residents of Colorado and the greater Rocky Mountain region.

Program Objectives

The Department of Bioengineering offers high-quality training in bioengineering that is both flexible and multidisciplinary. A design-based focus permeates every aspect of our training philosophy which can be summarized by the following question: what does the user want and how can I best utilize my bioengineering training to achieve this need? Our academic instruction focuses on developing core competencies in life sciences, quantitative methods, technology, and research methods.

Undergraduate Information

The program offers a Bachelor of Science (BS) degree in bioengineering. All undergraduate students begin the program on the CU Denver (Auraria) campus. In consultation with faculty advisors, each student chooses elective courses, training pathways, and research to fit talents, preparation, and career plans.

The BS in bioengineering degree will prepare students for careers in the biomedical industry, in hospital, government, or academic research labs, in regulatory agencies such as the FDA, and for further education in graduate school, medical school, or other advanced health sciences program.

The minimum of 128 semester hours is required to earn the BS degree, including 58 credits in bioengineering and prerequisite coursework and 24 credits in general education core at the Denver campus. This training is complemented by 46 credits in the upper-level bioengineering major and technical elective courses at the CU Anschutz Medical Campus.

Students can transition to the Anschutz Medical Campus in the fall semester once they have completed all MATH, BIOL, CHEM, PHYS and lower-division BIOE prerequisite coursework with a C- or higher and are in good academic standing.

BS/MS option

For full-time undergraduate CU Denver bioengineering students in the major, the bioengineering BS/MS option provides students the opportunity to begin graduate work while completing the undergraduate degree. Students are able to take six credits toward the Master of Science during the last year in the major as part of the Bachelor of Science technical electives, accelerating the time to obtain a graduate degree. Visit our website or contact us at bioengineering@ucdenver.edu.

Programs

- Bioengineering, BS (p. 304)

Faculty

Professors:

Keith Neeves, PhD
Email: keith.neeves@cuanschutz.edu
Specialties: Hematology and oncology

Robin Shandas, PhD
Email: robin.shandas@cuanschutz.edu
Specialties: Novel methods for translational bioengineering

Associate Professors:

Richard Benninger, PhD
Email: richard.benninger@cuanschutz.edu
Specialties: Optical microscopy, pancreatic islet biology and biophysics, diabetes

Cathy Bodine, PhD
Email: cathy.bodine@cuanschutz.edu
Specialties: Assistive technology, rehabilitation engineering

Emily Gibson, PhD
Email: emily.gibson@cuanschutz.edu
Specialties: Microfluidics technology, optical microscopy, and spectroscopy

Kendall Hunter, PhD
Email: kendall.hunter@cuanschutz.edu
Specialties: Soft tissue mechanics, vascular and cardiac imaging diagnostics, translational biomechanics

Jeffrey Jacot, PhD
Email: jeffrey.jacot@cuanschutz.edu
Specialties: Stem cells and heart tissue engineering

Daewon Park, PhD
Email: daewon.park@cuanschutz.edu
Specialties: Biomaterials, drug delivery, tissue engineering and regenerative medicine

Assistant Professors:

Chelsea Magin, PhD
Email: chelsea.magin@cuanschutz.edu
Specialties: Bio-inspired materials for tissue engineering, R & D product development

Bradford Smith, PhD
Email: bradford.smith@cuanschutz.edu
Specialties: Lung structure-function relationships, optimized mechanical ventilation, and high performance computing

Instructors:

Mary Bevilacqua, PhD Candidate
Email: mary.bevilacqua@cuanschutz.edu
Specialties: Global Heath and Design

Steven Lammers, PhD
Email: steven.lammers@cuanschutz.edu

Specialties: 3D printing & design, bioprintable materials, tissue engineering of 3D cellularized scaffolds

Associate Research Professors:

Richard Weir, PhD
Email: richard.weir@cuanschutz.edu
Specialties: Neural engineering, biomechatronic design, and rehabilitation engineering

Assistant Research Professors:

Brisa Pena-Castellanos, PhD
Email: brisa.penacastellanos@cuanschutz.edu
Specialties: Material science, atomic force microscopy, cardiac tissue engineering, and miRNA delivery

Affiliated Faculty

Students receive instruction from affiliate faculty in the University of Colorado system, including CU Boulder and the CU School of Medicine. Faculty research areas include Imaging and Biophotonics; Cardiovascular Biomechanics and Hemodynamics; Orthopedic Biomechanics; Surgery; Ophthalmology; and Neuroscience Engineering.

Bioengineering (BIOE)

BIOE 1010 - Bioengineering Design and Prototyping I (3 Credits)
BIOE 1010 introduces students to bioengineering, and provides an introduction to possible careers and research topics in bioengineering. Students also learn human anatomy by understanding how to incorporate visual human data sets into computer prototyping and design tools. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to BIOE-BS majorss within the College of Engineering, Design and Computing.
Typically Offered: Fall.

BIOE 1020 - Bioengineering Design and Prototyping II (3 Credits)
BIOE 1020 extends work from BIOE 1010 by introducing students to practical skills around computer-aided design (CAD), modeling and prototyping with focus on project-oriented work aimed at design, prototyping and metrology of specific medical devices. Prereq: BIOE 1010 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: BIOE 1010 with a C- or higher.
Typically Offered: Spring.

BIOE 2010 - Introduction to Programming for Bioengineers (2 Credits)
Digital computers are the primary tools of modern engineers. This class introduces the undergraduate to general computing concepts, computer languages, and programming techniques. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Prereq: MATH 1401 with a C- or higher. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 2020 - Introduction to Computational Methods for Bioengineers (2 Credits)
A modern engineer is required to solve problems involving the physical world not only on paper, but also using numerical tools implemented on digital computers. This class introduces the students a first set of numerical algorithms for the solution of calculus-based engineering problems. Prereq: BIOE 2010 and MATH 2411 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 2010 and MATH 2411 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design, and Computing.

BIOE 2840 - Independent Study in Bioengineering (1-6 Credits)
Covers topics which students may wish to pursue on their own initiative with guidance from department faculty. Credit is awarded upon completion of a project. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 3010 - Bioinstrumentation (3 Credits)
This course is intended for junior bioengineering students to facilitate their development into bioengineering investigation. The course has been designed to introduce fundamental principles of circuit theory, analog and digital electronics and biological instrumentation techniques commonly used in biomedical research. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3020 - Introduction to Biomechanical Analysis (3 Credits)
This course will offer an overview of solid and fluid mechanics, as applied to biomechanical systems. After completing this course, students should have enough understanding of biomechanics to: (1) perform and interpret basic analytical of biomech. systems: (2) analytically reason through a design: (3) and choose a specialty. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195 and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3030 - Introduction to Biomaterials (3 Credits)
This course will cover different kinds of biomaterials in biomedical applications, and their physiological response in the biological environment. In addition, it will cover material properties, host response, and characterization techniques. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3040 - Physiology for Bioengineering (3 Credits)
This course will introduce students to central concepts in human physiology. This includes the structure, function and homeostatic role of key organs within the body; the engineering principles governing these systems and processes; and designing engineering-based solutions to overcome dysfunction in disease. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3050 - Cell & Molecular Bioengineering (3 Credits)
This course focuses on the quantitative description of biomolecular and cellular dynamics. The building and application of mechanistic models of biological rate processes will be covered including models of protein-protein interactions, receptor-ligand binding, enzymatic reactions, gene expression, receptor trafficking, biomolecular networks, cell growth and death, and pharmacokinetics. These models will be used to analyze cellular engineering strategies such as chimeric antigen receptor T-lymphocyte therapy (CAR-T), small interfering RNA (siRNA), transfection, and CRISPR-Cas gene editing. Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3051 - Cell & Molecular Bioengineering Lab (1 Credit)
Laboratory experience in cellular and molecular biology techniques. Experimental methods will be performed including protein, RNA, DNA purification and quantification, ligand binding, enzyme kinetics, polymerase chain reaction technology, and recombinant DNA technology. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Co-req: BIOE 3050. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Co-req: BIOE 3050 Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3060 - Biostatistics, Measurement and Analysis (3 Credits)
Students will learn and apply parametric statistics, including t-tests, ANOVA, and regression methods, using commercially available statistical software to the analysis of clinical and/or biological data. Further, they will be introduced to measurement error and the propagation of error technique. Restriction: Restricted to BIOE-BS majors. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3070 - Bioengineering Lab I (3 Credits)
Core bioengineering lab required of all major students. This lab introduces students to experimental techniques in the areas of Biomaterials, Biomedical Instrumentation, and Biomechanics. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3071 - Bioengineering Lab II (3 Credits)
Lab sequence 2 of 2. A series of modules focused on quantitative techniques relative to Bioengineering. Modules will include Physiological data acquisition and analysis, Medical Imaging and Assistive Technologies. Prereq: BIOE 3070 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3070 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing.

BIOE 3090 - Introduction to BioDesign (3 Credits)
BioDesign I is the first course in a three sequence design process that provides students with a framework for identifying medical needs through clinical observation, environment analysis and product screening. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3939 - Undergraduate Internship (1-6 Credits)
Department of Bioengineering Internship. Credit may be applied toward technical electives in the BS in Bioengineering degree. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 3 Credits. Semester Hours: 1 to 3
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 4035 - Undergraduate BioDesign II (3 Credits)
This represents the second semester of the core undergraduate Biodesign sequence. Students gain experience around Design and Prototyping, Verification and Validation, and evaluation of key components around biomedical technology development. Prereq: BIOE 3090. Restriction: Restriction: Restricted to full Bioengineering majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3090 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4039 - Mechatronics and Embedded Systems (3 Credits)
The course focuses on the design and construction of microprocessor-controlled electro-mechanical systems. Lectures review critical circuit topics (Ohm's law, RLC circuits, DC and AC signals, diode and transistor circuits, operational amplifiers, and digital signals), introduce microprocessor architecture and programming, discuss sensor and actuator component selection, robotic systems, and design strategies for complex, multi-system devices. Lab work reinforces lectures and allows hands-on experience with robotic and embedded systems design. Students must design and build an embedded systems device related to assistive technology. Cross-listed with BIOE 5039. Restriction: Restricted to students with BIOE major designation, or instructor approval. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4045 - BioDesign III (3 Credits)
This course represents the capstone culmination of the core undergraduate Biodesign experience. Students finalize all design, prototyping, testing and validation components, and present the project per professional standards to professionals and peers. Prereq: BIOE 4035 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 4035 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4053 - Optics and Microscopy in Biomedical Research (3 Credits)
Undergraduate overview of optical imaging, ranging from classical microscopy to advanced, non-linear techniques and includes theory, technology and applications in biomedical sciences. This will prepare students for developing and applying state-of-the-art optical imaging in their research. Cross-listed with BIOE 5053. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4054 - Regulatory Affairs (3 Credits)
This course covers standards of quality assurance and regulatory pathways that guide biomedical engineering industry. Cross-listed with BIOE 5054. Restriction: Restricted to BIOE majors or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4057 - Rehabilitation and Assistive Technology (3 Credits)
This course provides students with an overview of technologies and their use by and for persons with disabilities. Cross-listed with BIOE 5057. Restriction: Restricted to students with BIOE designation, or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4058 - Intro to Design, Disability, and Aging (3 Credits)
This course provides an introduction to the topic of disability and aging and the application of bioengineering principles for persons living with functional impairment(s) across the lifespan. Cross-listed with BIOE 5058. Restriction: Restricted to BIOE majors or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4063 - 3D Modeling for Bioengineers (3 Credits)
This course instills in the 3D modeling skills specific to the biomedical industry. Topics include computer aided design (CAD), medical imaging, image processing, patient specific image to three-dimensional (3D) model reconstruction, non-uniform rational b-spline (NURBS) surfaces, finite element and computational fluid dynamics (FEA/CFD) analyses and physical modeling using rapid prototyping. Prereq: 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.
Typically Offered: Fall, Spring.

BIOE 4064 - Advanced MatLab For Bioengineers And Life Scientists (3 Credits)
MatLab programming for undergraduate bioengineers and life scientists. Topics include MatLab syntax and optimization as well as techniques for working with scalars, time-series, images and multi-dimension datasets. Surface/Curve fitting. modeling, automation and classification will be covered. Cross-listed with BIOE 5064. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4067 - Human Factors and Usability Testing for Bioengineers (3 Credits)
This course provides an introduction to human factors testing and evaluation in the context of medical devices and assistive technology (AT). Particular focus will be given towards designing and applying usability testing to inform product design decisions or improvements. Topics include human factor considerations for aging and disabled populations (and their care providers), usability techniques, user experience data collection and interpretation, etc. Students will engage in hands-on human factors assessments such as contextual inquiry of surgery patients, cognitive walkthroughs with simulating disability, and product usability testing and iteration. Max hours: 3 Credits.
Grading Basis: Letter Grade

BIOE 4068 - Introduction to Medical Imaging (3 Credits)
This course will introduce undergraduates to the basic physics, technologies, and clinical methodologies underlying Ultrasound, MRI, CT, PET and SPECT imaging systems. The course will include lectures, and visits to campus hospital and research imaging systems as well as hands on ultrasound labs. Cross-listed with BIOE 5068. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4069 - Advanced Biomechanics for Undergraduates (3 Credits)
This course covers advanced topics such as blood flow dynamics, introduction to non-linear finite deformation techniques, blood rheology, and computational techniques. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Cross-listed with BIOE 5069. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4073 - Neural Interfaces and Bionic Limbs (3 Credits)
This course will introduce undergraduates to topics in neural interfaces (Brain machine interfaces, peripheral nerve interfaces etc), the issues involved in the design of mechatronic limb systems and the decoding algorithms used to map the neural interface to the mechatronic limb. Cross-listed with BIOE 5073. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4083 - Polymers in Biomedical Applications (3 Credits)
This course will introduce undergraduate students to fundamental synthetic method and basic characteristics of various polymeric biomaterials and their crucial roles in different biomedical applications. It will also cover how the polymers can be modified to enhance biomedical applications. Cross-listed with BIOE 5083. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4085 - Tissue Engineering (3 Credits)
This course covers tools, techniques, characterization and applications in modern tissue engineering. Cross-listed with BIOE 5085. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4420 - Special Topics in Bioengineering (1-3 Credits)
Special topics of particular interest to undergraduate senior in the Bioengineering program. Registration requires departmental approval. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.
Typically Offered: Spring.

BIOE 4840 - Independent Study in Bioengineering (1-6 Credits)
Covers advanced topics which students may wish to pursue on their own initiative with guidance from department faculty. Credit is awarded upon completion of a project. Department Consent Required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 4929 - Undergraduate Research Project (1-6 Credits)
Department of Bioengineering Research Project. Credit may not be applied toward the BS in Bioengineering degree. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

Bioengineering, BS

Introduction

Please click here (p. 299) to see Bioengineering department information.

The undergraduate program at CU Denver is a highly rigorous program instilling competencies in biomedical science, engineering, and mathematics and biomedical design, while emphasizing the professional competencies of leadership, communication, presentation and critical problem solving. Our mission is to improve human health through the application of engineering principles, ideas, methods, and inventions to solve important clinical problems. Bioengineering is a highly interdisciplinary field that brings together:

1. engineering, science, and mathematics
2. biological, chemical, and physical sciences
3. clinical medicine

The undergraduate bioengineering program provides training at both the CU Denver campus and the CU Anschutz Medical Campus.

Graduates of the undergraduate program in bioengineering are expected to attain at least one of the following objectives within a few years after graduation:

1. Be employed as a professional in the biomedical engineering field or related industry using knowledge and skills obtained in the program.
2. Be progressing toward an advanced degree in:
   a. health sciences or medical school
   b. graduate school
   c. business or law school, or other advanced professional programs.

Program Educational Objectives (PEOs) can be found on the department's website.

Program Delivery

- This is an on-campus program.
- Upper-division major courses will be taught at the Anschutz Medical Campus.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.
- Students can be admitted to the bioengineering major by meeting the incoming freshmen, transfer and Intra-University Transfer (IUT) (p. 68) Admissions guidelines.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

The bioengineering major requirements include three different types of courses: downtown courses, upper-division bioengineering courses, and technical electives.

Downtown Courses; Students must complete all 58 credits of math, biology, chemistry, physics and lower-division bioengineering requirements with a C- or higher prior to transitioning to the Anschutz Medical Campus. Credit for some of these courses may be achieved through high school Advanced Placement (AP) course work and exams, International Baccalaureate (IB) coursework and exams, as well as transfer credit.

Code	Title	Hours
Mathematics		
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 2421	Calculus III	4
MATH 3195	Linear Algebra and Differential Equations	4
Biology		
BIOL 2010	Organisms to Ecosystems (Gen Bio)	3
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
BIOL 2020	Molecules to Cells (Gen Bio)	3
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
Chemistry		
CHEM 2031	General Chemistry I	3
CHEM 2038	General Chemistry Laboratory I	1
CHEM 2061	General Chemistry II	3
CHEM 2068	General Chemistry Laboratory II	2
CHEM 3411	Organic Chemistry I	4
CHEM 3418	Organic Chemistry Lab I	1
Physics		
PHYS 2311	General Physics I: Calculus-Based	4
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2331	General Physics II: Calculus-Based	4
PHYS 2341	Intro Experimental Phys Lab II	1
Lower-Division Bioengineering Courses		
BIOE 1010	Bioengineering Design and Prototyping I	3
BIOE 1020	Bioengineering Design and Prototyping II	3
BIOE 2010	Introduction to Programming for Bioengineers	2
BIOE 2020	Introduction to Computational Methods for Bioengineers	2
Upper-Division Bioengineering [1]		
BIOE 3010	Bioinstrumentation	3
BIOE 3020	Introduction to Biomechanical Analysis	3
BIOE 3030	Introduction to Biomaterials	3
BIOE 3040	Physiology for Bioengineering	3
BIOE 3050	Cell & Molecular Bioengineering	3
BIOE 3051	Cell & Molecular Bioengineering Lab	1
BIOE 3060	Biostatistics, Measurement and Analysis	3
BIOE 3070	Bioengineering Lab I	3
BIOE 3071	Bioengineering Lab II	3
BIOE 3090	Introduction to BioDesign	3
BIOE 4035	Undergraduate BioDesign II	3

BIOE 4045	BioDesign III	3
Bioengineering Technical Electives		
Select 12 credit hours		12
Option I - Approved Technical Electives (p. 305)		
Option II - Petition Courses (p. 305)		
Total Hours		**104**

[1] Upper-division major classes will be taught at the Anschutz Medical Campus. These classes build upon the downtown coursework and provide the next level of instruction in bioengineering. Student can enroll in these courses once they have completed the downtown courses with a C- or higher and are in good academic standing.

Bioengineering Technical Electives Guidelines

Bioengineering students are required to take 12 credit hours of technical electives to complete their undergraduate degree. Technical electives are upper-division (3000 or 4000-level) or graduate (5000+) bioengineering courses taken after matriculation to the pre-bioengineering major. Students are responsible for meeting all prerequisites for technical electives.

Students may select any combination of approved BIOE courses for technical electives or by petition, which requires approval from the Bioengineering Undergraduate Affairs Committee. Petitions are required for selecting a BIOE course not currently approved or to take more than three credit hours of non-bioengineering courses.

Option I - Approved Technical Electives

Students may select any combination of approved Bioengineering (BIOE) courses and up to three credit hours of non-bioengineering courses.

Code	Title	Hours
BIOE 4XXX-5XXX		3
BIOE 4XXX-5XXX		3
BIOE 4XXX-5XXX		3
BIOE 4XXX-5XXX or approved non BIOE 4XXX-5XXX		3

BS/MS students are required to take BIOE 5010 Cell and Molecular Biology for Bioengineers or BIOE 5011 Systems Physiology for Bioengineers and BIOE 5020 Analytics and Machine Learning in Bioengineering as 6 of the 12 credits that apply as Technical Electives and MS coursework.

Code	Title	Hours
BIOE 5010	Cell and Molecular Biology for Bioengineers	3
or BIOE 5011	Systems Physiology for Bioengineers	
BIOE 5020	Analytics and Machine Learning in Bioengineering	3
BIOE 4XXX-5XXX		3
BIOE 4XXX-5XXX or approved non-BIOE 4XXX-5XXX		3

Option II - Petition Courses

Students may petition to have up to 6 credit hours of non-bioengineering courses (upper division) for technical electives. (CHEM, MATH, BIOL, MECH, ELEC).

Code	Title	Hours
BIOE 4XXX-5XXX		3
BIOE 4XXX-5XXX		3
Non-BIOE 4XXX-5XXX		3
Non-BIOE 4XXX-5XXX (must petition a second non-BIOE course)		3

Students may also petition to have a non-bioengineering course added to the approved list by submitting a current syllabus as part of the petition process.

Approved Bioengineering Technical Electives

Code	Title	Hours
BIOE 4039/5039	Mechatronics and Embedded Systems (Fall)	3
BIOE 4053/5053	Optics and Microscopy in Biomedical Research (Spring)	3
BIOE 4054	Regulatory Affairs (Fall)	3
or BIOE 5054	Regulatory Affairs	
BIOE 4057/5057	Rehabilitation and Assistive Technology (Fall)	3
BIOE 4063/5063	3D Modeling for Bioengineers (Fall)	3
BIOE 4064/5064	Advanced MatLab For Bioengineers And Life Scientists (Fall)	3
BIOE 4067/5067	Human Factors and Usability Testing for Bioengineers (Spring)	3
BIOE 4068/5068	Introduction to Medical Imaging	3
BIOE 4069/5069	Advanced Biomechanics for Undergraduates (Fall)	3
BIOE 4073/5073	Neural Interfaces and Bionic Limbs	3
BIOE 4083/5083	Polymers in Biomedical Applications (Spring)	3

Special Topics

Code	Title	Hours
BIOE 4420/5420	Special Topics in Bioengineering (Intro to Design, Disability and Aging (Spring))	1-3
BIOE 4420/5420	Special Topics in Bioengineering (Medical Device Life Cycle (Spring))	1-3
BIOE 4420/5420	Special Topics in Bioengineering (Bioengineering Design Hack for Global Health (Winterim))	1-3

Note: Special Topics offerings can change each semester. Review Course offerings on UCD Access for current offerings. All BIOE 4420 Special Topics in Bioengineering /BIOE 5420 Special Topics in Bioengineering courses can apply towards Technical Electives.

Internship/Independent Study/Research

Code	Title	Hours
BIOE 3939	Undergraduate Internship	1-6
BIOE 4840	Independent Study in Bioengineering	1-6
BIOE 4929	Undergraduate Research Project [1]	1-6

[1] Student can utilize no more than 3 credits hours of combined research and independent study towards technical electives.

Graduate

Code	Title	Hours
BIOE 5010	Cell and Molecular Biology for Bioengineers (Fall)	3
BIOE 5011	Systems Physiology for Bioengineers (Spring)	3
BIOE 5020	Analytics and Machine Learning in Bioengineering (Fall) [1]	3
BIOE 5021	Numerical Methods for Engineering Analysis (Spring)	3

BIOE 5420	Special Topics in Bioengineering (Stem Cell and Regenerative Medicine (Fall))	1-6
BIOE 5420	Special Topics in Bioengineering (Graduate Biodesign (Fall))	1-6

[1] Required for BS/MS students. Students can choose to take BIOE 5010 Cell and Molecular Biology for Bioengineers or BIOE 5011 Systems Physiology for Bioengineers.

Approved Non-Bioengineering Technical Electives

Code	Title	Hours
BIOL 3832	General Genetics	3
BIOL 3244	Human Anatomy	5
BIOL 3611	General Cell Biology	3
BIOL 3763	Biostatistics	4
BIOL 4644	Advanced Human Anatomy Laboratory	2
BIOL 5024	Introduction to Biotechnology	3
CHEM 3810	Biochemistry	4
CHEM 3421	Organic Chemistry II	4
CHEM 4810	General Biochemistry I	3
CSCI 3412	Algorithms	3
CSCI 3508	Introduction to Software Engineering	3
CSCI 4287	Embedded Systems Programming	3
ELEC 3030	Electric Circuits and Systems	3
MATH 4650	Numerical Analysis I	3
MECH 4020	Biomechanics	3
MECH 4025	Advanced Biomechanics	3
MECH 4175	Finite Element Analysis in Machine Design	3
PHYS 3120	Methods of Mathematical Physics	3
PHYS 4980	Advanced Physics Topics	1-3

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Civil Engineering

Chair: Kevin L. Rens
Program Manager: Pam Mettler
Office: North Classroom, 2506
Telephone: 303-315-7160
Email: civilengineering@ucdenver.edu
Website: ucdenver.edu/civil (http://www.ucdenver.edu/civil/)

Overview

Mission Statement

The mission of the Department of Civil Engineering:

- deliver high-quality comprehensive degree programs (BS, MS, MEng, PhD) to all of our students at both the undergraduate and graduate levels
- matriculate students who excel in professional practice and leadership and who possess compassion and respect for people of all cultural backgrounds
- teach our classes with excellence, whether in a traditional classroom setting or online
- offer our students state-of-the-art laboratories, equipment and classrooms with the latest technology needed for a complete learning experience
- develop ambitious and innovative research programs involving both faculty and students through funding from federal, state and local sources
- provide supportive mentoring and guidance to our students through teaching, research and advising
- produce students who can work as leading professionals in civil engineering and in many other fields for which civil engineering knowledge can be a foundation

Undergraduate Information

The CU Denver undergraduate civil engineering curriculum places balanced emphasis on five principal areas of civil engineering practice: structures, transportation, environmental, water resources and geotechnical engineering. In each of these areas, the student receives instruction in planning, design and analysis methods. Relevant computing skills are taught early in the program of study and used frequently in subsequent courses. The department also offers undergraduate degrees with industry-backed curriculum in construction engineering and management and construction management.

A minimum of 130 semester hours is required to earn a bachelor of science in civil engineering degree. The bachelor of science in construction engineering and management requires a minimum of 128 semester hours, and the bachelor of science in construction management requires a minimum of 120 semester hours. The department provides advising to help students develop an efficient study plan. The student must satisfactorily complete all the course work in the curriculum, satisfy all university graduation requirements, and maintain at least a 2.0 GPA in the civil engineering courses.

Programs

- Civil Engineering, BS (p. 314)
- Construction Engineering and Management, BS (p. 316)
- Construction Management, BS (p. 320)
- Construction Management Minor (p. 322)

Faculty

Professors:

Caroline Clevenger, PhD, Stanford University, PE, RA-Colorado
Yail Jimmy Kim, PhD, Queen's University, Professional Engineer (PEng)-Canada
Wesley Marshall, PhD, University of Connecticut, PE-Connecticut
David C. Mays, PhD, University of California at Berkeley, PE-Colorado, California
Kevin L. Rens, PhD, Iowa State University, PE-Colorado

Associate Professors:

Arunprakash Karunanithi, PhD, University of Connecticut
Chengyu Li, PhD, Arizona State University; PE-Colorado, North Carolina, New Mexico, Washington; SE-Utah, Arizona, Washington

Assistant Professors:

Moatassem Abdallah, PhD, University of Illinois at Urbana-Champaign
Heidi Brothers, PhD, University of Cincinnati
Allison Goodwell, PhD, University of Illinois at Urbana-Champaign

Professors Emeriti:

Paul E. Bartlett, PhD, University of Colorado, PE-Colorado
Nien-Yin Chang, PhD, Ohio State University, PE-Ohio and Colorado
James C.Y. Guo, PhD, University of Illinois at Urbana-Champaign, PE-Colorado
David W. Hubly, PhD, Iowa State University, PE-Colorado
Bruce N. Janson, PhD, University of Illinois at Urbana-Champaign
Lynn E. Johnson, PhD, Cornell University, PE-Connecticut
Oren G. Strom, PhD, University of Texas at Austin

Civil Engineering (CVEN)

CVEN 1025 - Civil Engineering Graphics and Computer Aided Design (3 Credits)
Introduces microcomputer-based, menu-driven, 2-D and 3-D computer-aided design systems; standard Civil Engineering industry details and some three-dimensional modeling of solid objects; principles on engineering drawing and descriptive geometry with applications specifically geared for civil engineers. Prereq: High School Geometry and Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CVEN 1067 - Introduction to Civil Engineering (1 Credit)
Introduces civil engineering and the many career choices in this broad field. Covers the history of the profession, current civil engineering projects, societal and global implications, technologies used, professional ethics, sustainability, and licensure. Max hours: 1 Credit.
Grading Basis: Letter Grade

CVEN 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, ENGR 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

CVEN 2121 - Analytical Mechanics I (3 Credits)
A vector treatment of force systems and their resultants; equilibrium of trusses, beams, frames, and machines, including internal forces and three-dimensional configurations, static friction, properties of areas, distributed loads and hydrostatics. Prereq: PHYS 2311 with a C- or higher and Prereq/Coreq: MATH 2411. Cross-listed with MECH 2023. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 with a C- or higher. Prereq/Coreq: MATH 2411.

CVEN 2212 - Surveying for Construction and Engineering (2 Credits)
Survey observations used by engineers and surveyors using levels and total stations to make sure things are put in the right place and leveled; analysis and adjustment of measured loops, traverses; areas and volumes; methods used in construction; analysis of error sources; and presentation of results. Course includes a required lab section. Max hours: 2 Credits.
Grading Basis: Letter Grade

CVEN 2214 - Surveying for Engineering (1 Credit)
Survey observations used by engineers and surveyors using levels and total stations to make sure things are put in the right place and leveled; analysis and adjustment of measured loops, traverses; areas and volumes; methods used in construction; analysis of error sources; and presentation of results. This course does not include a lab. Max hours: 1 Credit.
Grading Basis: Letter Grade

CVEN 2215 - Surveying Lab (1 Credit)
For those students in CVEN 2214 who wish to experience hands-on use of the principal survey equipment they see in the lectures. Provides access to levels and theodolites to perform measurements, record, check, and adjust them. Prereq or Coreq: CVEN 2214. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 2214.
Typically Offered: Fall, Spring.

CVEN 3111 - Analytical Mechanics II (3 Credits)
A vector treatment of dynamics of particles and rigid bodies, including rectilinear translation, central-force, general motion of particles, kinematics of rigid bodies, the inertia tensor, plane motion of rigid bodies; energy and momentum methods for particles, systems of particles and rigid bodies. Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better. Cross-listed with MECH 2033. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better.

CVEN 3121 - Mechanics of Materials (3 Credits)
Mechanical properties of materials, stresses and strains in members subjected to tension, compression and shear, combined stresses, flexural and shearing stresses in beams, deflections of beams, column analysis, principal stresses. Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better. Cross-listed with MECH 3043. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better.

CVEN 3141 - Introduction to Structural Materials (2 Credits)
To learn the fundamental characteristics of structural materials, including steel, concrete, masonry, timber, and composites; to learn how to test structural materials in the laboratory; and to learn how to interpret test data for engineering applications. After completing this course, students are expected to understand the behavior of structural materials and establish necessary background for structural design courses. Prereq or Coreq: CVEN 3121 or MECH 3043. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 3121 or MECH 3043.

CVEN 3200 - Computational Methods for Civil Engineers (3 Credits)
This course introduces advanced programming and data analysis skills pertinent to the range of civil engineering disciplines. Topics will include numerical methods, statistical analysis, and programming techniques for measurements and data collection. Languages and tools may include Excel, Matlab, Python, and Arduino. Prereq: (IWKS 2300 or ENGR 1100) and (MATH 3800 or CVEN 3611) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: (IWKS 2300 or ENGR 1100) and (MATH 3800 or CVEN 3611) with a C- or higher.

CVEN 3313 - Fluid Mechanics (3 Credits)
Fundamentals of fluid mechanics. Topics include fluid properties, hydrostatics, the continuity principle, the energy principle, the momentum principle, similitude and dimensional analysis, drag, and friction for laminar and turbulent flow in closed conduits. Prereq: CVEN 2121 or MECH 2023 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

CVEN 3323 - Hydrosystems Engineering (3 Credits)
Civil engineering hydraulics applied to the hydrologic cycle; surface- and groundwater resources; precipitation, streamflow, and groundwater measurements; and basics of reservoir operation, open channel hydraulics, and storm water design. Prereq: CVEN 3313 and ENGR 1100 or IWKS 2300 with a C- or higher. Restriction: Restricted to Civil Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3313 and ENGR 1100 or IWKS 2300 with a C- or higher.
Restriction: Restricted to Civil Engineering majors.

CVEN 3401 - Introduction to Environmental Engineering (3 Credits)
Introduces students to the broad field of environmental engineering. Topics include essential chemical, biological, and risk assessment concepts needed for addressing environmental problems. Major unit operations and processes used for treating wastewater and potable drinking water. An overview of technologies used for treating particulate and gaseous air pollutants, managing solid wastes, and remediating hazardous wastes. The course also introduces environmental sustainability, green engineering, life cycle assessment and other systems oriented concepts. Prereq: CHEM 1130 or CHEM 2031 or ENGR 1130 with a C- or better. Cross-listed with CVEN 5401. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 1130 or CHEM 2031 or ENGR 1130 with a C- or better.

CVEN 3505 - Structural Analysis (3 Credits)
The focus of this course is on the understanding of structural analysis principles and application of techniques. We will build upon topics initiated in prerequisite courses. Topics include: Introduction to loads, structural idealization, analysis of trusses, arches, beams and frames, cables, influence lines, beam deflections, and introductions to matrix analysis and computer-assisted analysis. The course will be fast-paced and mathematically rigorous. Prereq: CVEN 3121 or MECH 3043 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3121 or MECH 3043 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 3602 - Transportation Engineering (3 Credits)
This course will introduce you to the concepts and methods of transportation engineering, planning and management. This course will emphasize traffic engineering. Topics will include vehicle dynamics, traffic flow fundamentals, accident analysis, signal timing, highway capacity analysis, level of service analysis, freeway operations, and evaluation procedures for alternative transportation projects. Prereq: C- or better in MATH 1401 or Junior Standing or instructor permission. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 1401 or Junior Standing or instructor permission

CVEN 3611 - Engineering Statistics (3 Credits)
Covers statistical methods for engineering studies. Topics include common probability distributions, sample design, descriptive statistics, hypothesis testing of one or two populations, tests of discrete versus continuous random variables, analysis of variance, linear and non-linear multiple regression models, non-parametric tests of fit. Prereq: MATH 2411 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411 with a C- or better.

CVEN 3718 - Geotechnical Engineering I (3 Credits)
Soil formation, phase diagram, soil constituents and behavior, description of soils, classification, clay minerals, compaction, soil improvement, capillarity, shrinkage, swell, collapsible soil, frost action, flow through porous media, and consolidation. Lab experiments, including specific gravity, grain size analysis, liquid and plastic limits, and consolidation, are to be conducted in concert with the lectures. Prereq: CVEN 3121 or MECH 3043 with a C- or higher. Pre or Coreq: CVEN 3313. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3121 or MECH 3043 with a C- or higher Pre or Coreq: CVEN 3313 Restriction: Restricted to Civil or Construction Engineering majors
Typically Offered: Fall, Spring.

CVEN 4000 - Senior Seminar (0 Credits)
Required for all Civil Engineering majors. This course is generally taken the semester of graduation. To complete this course one must complete the fundamentals of engineering exam from the national council of examiners for engineering and surveying, attend any required course meetings, and complete an ethics assignment. Failure to attend the required meeting(s) of this course will delay graduation. Prereq or Coreq: CVEN 4067. Max hours: 0 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 4067
Typically Offered: Fall, Spring.

CVEN 4025 - Autocad Civil 3d & Advanced Civil Engineering Graphics (3 Credits)
Lectures target civil engineering industry specific site information modeling software and geospatial industry specific geographical information systems software to elevate students' knowledge of each software to an in-depth understanding. Laboratory exercises will focus on civil drafting and design, producing documentation, and general project workflows. Additional laboratory exercises will focus on geospatial data creation, data management, and cartographic display. Prereq: CVEN 1025. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 1025

CVEN 4067 - Senior Design Projects (3 Credits)
Senior civil engineering students, working in teams, are assigned significant open-ended design problems requiring the synthesis of material learned in previous engineering courses for solution. Design teams work independently under the supervision of a civil engineering faculty member. Prereq: Graduation Agreement and one design course. Co-req: A second design course. Restriction: Restricted to Civil Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 4427 or 4565 or 4575 or 4585 or 4602 or 4738 with a C- or higher Coreq: CVEN 4427 or 4565 or 4575 or 4585 or 4602 or 4738 Restrictions: Restricted to Civil Engineering majors.

CVEN 4077 - Engineering Economy (3 Credits)
Applies economic and financial principles to evaluation of engineering alternatives. Calculation of annual costs, present worth and prospective rates of return on investment. Review of systems analysis techniques, including simulation, linear programming, and project scheduling. Prereq: Junior standing. Cross-listed with MECH 4147. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to junior standing majors in the College of Engineering, Design and Computing

CVEN 4087 - Engineering Contracts (3 Credits)
Laws met by the practicing engineer, types of contracts, specification writing, laws on contracts, agency, partnership, sales and property, with primary emphasis on rights and duties of the engineer. Prereq: Senior standing. Cross-listed with CVEN 5087. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to senior standing majors in the College of Engineering, Design and Computing

CVEN 4426 - Pipe Network and Sewer Design (3 Credits)
Design of pressurized pipe networks for water supply and sanitary sewers for wastewater collection. Topics include the civil engineering design process, estimation of water and wastewater design loads, and design of pressurized pipe networks and sanitary sewers including pump selection, service reservoirs, lift stations, and relevant software. Design project and field trip required. Prereq: CVEN 3313 and Prereq or Coreq: ENGR 1100 or IWKS 2300 with a C- or better. Cross-listed with CVEN 5426. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3313. Prereq or Coreq: ENGR 1100 or IWKS 2300 with a C- or better.

CVEN 4427 - Storm Water System Design (3 Credits)
This course covers urban watershed analysis, design rainfall and hydrologic losses, flood frequency and design event, rational method for peak runoff prediction, street hydraulic capacity and safety, culvert hydraulics, street inlet collection system, and storm sewer system design and flow analysis. Prereq: CVEN 3323 and senior standing. Restriction: Restricted to Civil Engineering majors. Cross-listed with CVEN 5427. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3323 with a C- or higher Restriction: Restricted to Civil Engineering majors

CVEN 4520 - Structural Engineering and the Ocean Environment (3 Credits)
This course explores the design of structures for coastal and ocean resilience within the broader context of climate change adaptation. The following subjects will be introduced: coastal and oceanic wave dynamics; hydrodynamic forces on coastal structures and methods for attenuation; analysis and design of floating structures. Prereq: MATH 2421 with a C- or better and CVEN 3121 or MECH 3043 with a C- or better. Cross-listed with CVEN 5520. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 with a C- or better and CVEN 3121 or MECH 3043 with a C- or better.

CVEN 4565 - Timber Structure Design (3 Credits)
Design of wood roof, wall, and floor systems including beams, columns, trusses, diaphragms and shear walls for vertical and lateral loads. Connection design, glued-laminated members, plywood, and engineered lumber are incorporated. Prereq: CVEN 3505 and CVEN 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5565. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4575 - Structural Steel Design (3 Credits)
Design of structural steel members and their connections. Prereq: CVEN 3505 and 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4585 - Reinforced Concrete Design (3 Credits)
The course objective is to introduce the students to the principles of structural design in reinforced concrete. The course emphasizes determining loads for structural design and using these loads to design reinforced concrete members. Prereq: CVEN 3505 and 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4590 - Design of Prestressed Concrete (3 Credits)
To learn the basic concepts of analysis and design of prestressed concrete, which is reinforced concrete in which steel is tensioned against the concrete, thereby introducing compression in concrete and hence overcoming the tensile weakness of concrete relative to its compressive strength. Cross-listed with CVEN 5590. Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4591 - Design of Composite Structures (3 Credits)
The objective of this course is to provide engineering students with an overall awareness of the application and design of composite structures. Practical examples are discussed based on theory. Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5591. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4592 - Computer-Aided Structural Analysis and Design (3 Credits)
The objective of this course is to introduce students to the fundamentals of computer-aided structural analysis and design. The course emphasizes different theoretical formulations of computational mechanics and the practical use of computer programs used worldwide in the structural engineering profession. Emphasis is also placed on techniques to check the reliability and quality of solutions. Prereq: CVEN 3505 with a C- or better or graduate standing. Cross-listed with CVEN 5592. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 with a C- or higher or graduate standing (GRAD or NDGR).

CVEN 4602 - Advanced Highway Design (3 Credits)
This course delves into the art and science of designing sustainable and context sensitive street and highway facilities. Topics include road classification, transportation planning, road alignments, cross-section design, bicycle and pedestrian facilities, intersections, and street network design. Such details are a focus of the course; however, the overarching theme reflects upon the social, economic, and environmental implications of highways and as well as proper integration into the overall transportation system. Prereq: CVEN 3602 and CVEN 3718 with a C- or better; Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5602. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 and CVEN 3718 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.
Typically Offered: Fall.

CVEN 4612 - Traffic Impact Assessment (3 Credits)
Covers (1) procedures to satisfy state and local requirements for transportation impact studies, (2) methods to perform trip generation, distribution, and traffic assignment for impact analyses, and (3) analysis of transportation impacts on residential communities, mode choice, regional business (downtown or suburban), peak and off-peak travel times, noise, safety, parking and pedestrians. A course project requires students to develop an application of analysis software to a case study area. Prereq: CVEN 3602 with a C- or better. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or better.

CVEN 4621 - Highway Capacity Analysis (3 Credits)
Covers the principles and applications of highway capacity analysis for freeways and arterials, ramps and interchanges, weave and merge sections, signalized and unsignalized intersections, roundabouts, pedestrian areas and transit. Emphasis is on level-of-service analysis procedures in the Highway Capacity Manual, although other approaches are also discussed. Additional topics include roadway characteristics, vehicle dynamics, human factors, speed and volume studies, travel time surveys and traffic flow characteristics. Prereq: CVEN 3602 with a C- or better. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or better.

CVEN 4631 - Transport Modeling and Big Data (3 Credits)
This course is an introduction to the models, frameworks and techniques used in estimating demand for passenger travel across modes and regions. The goal is to provide you an overview of the different steps involved in traditional travel demand forecasting methods and then delve into newer "big" data sources and methods that will allow us to observe and analyze travel in completely new ways. We will also briefly cover sampling techniques and survey design as part of data collection for estimation of travel demand. Prereq: Any statistics course with a C- or better(MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010). Cross-listed with CVEN 5631. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2830, MATH 3800, CVEN 3611, ELEC 3817, or BANA 2010 with a C- or higher.
Typically Offered: Spring.

CVEN 4650 - Urban Street Design (3 Credits)
This course delves into the art and science of designing sustainable and context sensitive street and highway facilities. This course is intended to intersect with CVEN 4602/5602 – Advanced Highway Design, which covers rural highway design. Topics for this course will focus on urban street design principles, including transportation planning, bicycle and pedestrian facilities, intersections, and street network design, as well as techniques and software for coordinated signal timing. Such details are a focus of the course; however, the overarching theme reflects upon the social, economic, and environmental implications of highways and as well as proper integration into the overall transportation system. Prereq: CVEN 3602 with a C- or higher, recommend B- or higher. Prereq or coreq: CVEN 4602 or CVEN 5602. Cross-listed with CVEN 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or higher. Coreq or prereq: CVEN 4602 or CVEN 5602.
Typically Offered: Summer.

CVEN 4738 - Intermediate Foundation Engineering (3 Credits)
Applies principles of soil mechanics to the analysis and design of foundations and earth structure. Theories of consolidation, earth pressure, slope stability, and bearing capacity. Studies settlement of structures, shallow and deep foundations, retaining walls and excavations. Cross-listed with CVEN 5738. Prereq: CVEN 3141 and 3718 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3141 and 3718 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4800 - Special Topics (3 Credits)
Supervised study of special topics of interest to students under guidance of instructor. Prereq: Permission of instructor. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

CVEN 4840 - Independent Study (1-6 Credits)
This category is intended for topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Departmental approval is required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

CVEN 4939 - Internship (1-3 Credits)
Civil Engineering undergraduate internship. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Construction Engineering and Management (CEMT)

CEMT 1000 - Introduction to Construction Management (1 Credit)
Course provides an introduction to the construction industry and project management. Student will learn basic CM terminology, roles and responsibilities associated with a construction project, and construction documents. Max hours: 1 Credits.
Grading Basis: Letter Grade

CEMT 2100 - Construction Management Fundamentals (3 Credits)
This course focuses on introducing the field of construction engineering and management. Topics will include introduction to construction management and work process; drawings; cost estimating; project planning and control; construction operations and job site management; quality and safety management; and building information modeling. Course participants will gain knowledge about construction engineering and management through lectures, exercises, class presentations, projects and group activities. Course includes a field trip to a construction site and guest speakers from the construction industry as the course time allows. Max hours: 3 Credits.
Grading Basis: Letter Grade

CEMT 2300 - Heavy Civil Construction and Equipment (3 Credits)
Course includes an introduction to heavy civil construction equipment, materials, labor and methods. Students will learn to perform comparative cost analysis for owning and operating heavy equipment; and perform the proper selection, applications, utilization and productivity of heavy equipment with the associated labor and logistics. Max hours: 3 Credits.
Grading Basis: Letter Grade

CEMT 3100 - Field Engineering and Management (3 Credits)
se includes an overview of field engineering and management. Students will assess basic design of temporary structures, quality assurance and quality control, and materials testing and processing. Students will learn the fundamentals of soils engineering. Students will be able to apply surveying concepts and generate site layout. Students will learn the basics of safety, accident prevention, risk management, and regulatory compliance on construction sites. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4067 - Construction Senior Capstone (3 Credits)
Students will work in teams to formulate or design a construction project requiring the synthesis of material learned in previous courses. The student teams will establish goals, plan and accomplish tasks, meet deadlines, analyze risk and uncertainty, and demonstrate leadership and management skills. Teams will coordinate and communicate with a range of stakeholders and give final presentations. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4231 - Construction Materials and Methods (3 Credits)
This course serves as an introduction to the primary materials and methods used to construct buildings and infrastructure across the United States, including concrete, wood and steel. Students explore processes related to specifying and installing materials, as well as analyze various material performance characteristics. Students are required to complete lectures, videos and class activities. Students also research and present information on a wide range of materials and construction processes. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4232 - Construction Planning and Control (3 Credits)
This course presents knowledge on planning and controlling of construction projects. Students will learn the basics of construction planning to develop work breakdown structure and activity list, estimate activity cost and duration, and identify job logic and precedence relationships. Several scheduling techniques will be presented in this class, including bar chart, network scheduling, uncertainty in scheduling (PERT), limited resources scheduling, resource leveling, line of balance, and time-cost tradeoff analysis. Furthermore, this class will provide knowledge on cash flow analysis and construction control techniques such as Earned Value method. Students will acquire skills on the use of currently available computer scheduling and planning software such as Primavera 6 and Navisworks Manage to create 5D models to visualize sequence of the construction activities. In addition, students will forms teams and work on a project throughout the semester to apply the skills that they learn in class. Prereq: CEMT 2100 and a statistics course (MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010) with a C- better or instructor permission; Restriction: Restricted to students with senior standing. Cross-listed with CVEN 5232. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 and a statistics course (MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010) with a C- or better or instructor consent; Restriction: Restricted to students with senior standing.

CEMT 4233 - Construction Cost Estimating (3 Credits)
This course presents the application of scientific principles to rough and detailed cost estimating for construction. The course starts with an introduction to estimating and how it fits in bid/proposal process and construction management. Quantity take offs, putting costs to those quantities, overhead costs, cost markups and profits; and computerized estimating will be explored. The project includes quantity take and cost estimate for the concrete and metals portion of an actual project. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4234 - Sustainable Construction (3 Credits)
This course will serve as an introduction to major components and technologies used in sustainable design and construction to create healthy, environmentally-sensitive built environments. Content focuses on construction processes, renewable energy systems, healthy buildings, natural and cultural resources, and traditional as well as cutting-edge building techniques. Course participants will gain knowledge about effective sustainable practices through active learning by engaging in case studies, class presentations, and group activities. Numerous guest speakers will share first-hand experience regarding implementation and professional practice of sustainable principles in the real-world. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4236 - Project Management Systems (3 Credits)
Address the basic nature of managing projects and the advantages and disadvantages to this approach. Introduce the characteristics, techniques, and problems associated with initiating, planning, executing, controlling, and closeout of projects. Learn about the International Standards of PM and how to use them. Develop a management perspective about projects to help develop future project managers. Restriction: Restricted to CMGT-BS or CEMT-BS majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to CEMT or CMGT majors.

CEMT 4239 - Introduction to Temporary Structures and Construction Engineering (3 Credits)
This course will introduce the many types of temporary structures that are integral in the completion of construction projects. The temporary structures to be discussed include but are not limited to formwork, falsework, scaffolding, Support of Excavation (SOE), and equipment bridges. Construction Engineering will also be introduced including the application of structural engineering to crane picks and demolitions. The course includes planning, management and design aspects. The project includes the delivery of a formwork design that stresses the importance of constructability, cost, while providing updates throughout the project to the instructor. Cross-listed with CEMT 5239. Prereq: CEMT 2100 with a C- or better and junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 with a C- or better and junior standing or higher.

CEMT 4240 - Building Information Modeling (BIM) (3 Credits)
Building Information Modeling is an advanced approach to facility design and construction using object-oriented 3-D models. It can be integrated in the design and construction for analytical purposes, including design, visualization, quantity takeoff, cost estimating, planning, and facility management. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4242 - Construction Safety (3 Credits)
This course is a study of safety practices in the construction industry and the specific safety procedures used in safety management of a construction project. Topics include safety risks inherent in construction projects, the roles of government, the judicial system, the insurance industry, designers and project owners in safety management and the economic impact of injures. Advanced topics include safety risk quantification and analysis, design for safety and emerging technologies.
Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4939 - Internship (1-6 Credits)
Construction Engineering and Management Internship. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Civil Engineering, BS

Introduction

Please click here (p. 307) to see Civil Engineering department information.

The objectives of the bachelor of science in civil engineering program are to produce graduates who:

- are able to perform the technical analyses and design tasks of entry-level civil engineers
- can successfully work toward professional engineering licensure
- communicate effectively, both orally and in writing
- understand the importance of leadership skills, team building and ethical practice
- value lifelong learning and improvement through graduate degrees or professional study
- appreciate the importance of community involvement and social contribution civil engineers are dedicated to improving our living environment

Civil engineering offers an interesting and challenging career in the design, construction, and maintenance of buildings and urban infrastructure; in transportation systems, including highways, airports, rapid transit lines, railroads, and harbor facilities; in the development of water resources, including reservoirs for storage, canals for irrigation, dams for power generation, stormwater management for drainage, groundwater recharge for contamination prevention, wastewater treatment for environmental protection, and water purification for drinking purposes; in the construction industry; including foundations, bridges, concrete and steel structures, in problems concerned with environmental preservation; and in the sustainable development of cities. In preparing for work in such a broad field, the civil engineering student studies mathematics, basic science, communication, social science and humanities, engineering science and civil engineering design. CU Denver's civil engineering graduates usually find their first professional employment with consulting engineering firms, government agencies and various industries.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
2. Students must maintain a minimum 2.0 GPA in all CVEN and CEMT courses attempted.
3. Complete a minimum of 32 semester hours in math, chemistry, and physics
4. Complete a minimum of 18 semester hours of design courses

Code	Title	Hours
Civil Engineering		
CVEN 1025	Civil Engineering Graphics and Computer Aided Design	3
CVEN 1067	Introduction to Civil Engineering	1
ENGR 1100	Fundamentals of Computational Innovation	3
or IWKS 2300	Fundamentals of Computational Innovation	
CEMT 2100	Construction Management Fundamentals	3
CVEN 2121	Analytical Mechanics I	3
CVEN 2214	Surveying for Engineering	1-2
or CVEN 2212	Surveying for Construction and Engineering	
CVEN 3111	Analytical Mechanics II	3
CVEN 3121	Mechanics of Materials	3
CVEN 3141	Introduction to Structural Materials	2
CVEN 3200	Computational Methods for Civil Engineers	3
CVEN 3313	Fluid Mechanics	3
CVEN 3323	Hydrosystems Engineering	3
CVEN 3401	Introduction to Environmental Engineering	3
CVEN 3505	Structural Analysis	3
CVEN 3602	Transportation Engineering	3
CVEN 3718	Geotechnical Engineering I	3
CVEN 4000	Senior Seminar	0
Design Courses		**18**
Required:		
CVEN 4067	Senior Design Projects	
Select five of the following:		
ENGR 1200	Fundamentals of Engineering Design Innovation	
CVEN 4426	Pipe Network and Sewer Design	
CVEN 4427	Storm Water System Design	
CVEN 4565	Timber Structure Design	
CVEN 4575	Structural Steel Design	
CVEN 4585	Reinforced Concrete Design	
CVEN 4590	Design of Prestressed Concrete	
CVEN 4591	Design of Composite Structures	
CVEN 4602	Advanced Highway Design	
CVEN 4650	Urban Street Design	
CVEN 4738	Intermediate Foundation Engineering	
CVEN 5426	Pipe Network and Sewer Design	
CVEN 5427	Storm Water System Design	
CVEN 5540	Masonry Design	
CVEN 5550	Highway Bridge Design	
CVEN 5565	Advanced Timber Structure Design	
CVEN 5575	Advanced Topics in Structural Steel Design	
CVEN 5585	Advanced Topics in Reinforced Concrete	
CVEN 5682	Pavement Design	
CVEN 5590	Design of Prestressed Concrete	
CVEN 5602	Advanced Highway Design	

CVEN 5650	Urban Street Design	
Mathematics		
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 2421	Calculus III	4
MATH 3191 & MATH 3200	Applied Linear Algebra and Elementary Differential Equations	4-6
or MATH 3195	Linear Algebra and Differential Equations	
CVEN 3611	Engineering Statistics	3
or MATH 3800	Probability and Statistics for Engineers	
Chemistry		
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I [1]	5
or ENGR 1130	Chemistry for Engineers	
Physics		
PHYS 2311	General Physics I: Calculus-Based	4
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2331	General Physics II: Calculus-Based	4
Other Courses		
Select one of the following:		3
CVEN 4025	Autocad Civil 3d & Advanced Civil Engineering Graphics	
CVEN 4077	Engineering Economy	
CVEN 4087	Engineering Contracts	
Electives		
Select three elective courses. Some examples are listed below. [2]		9
CEMT 4231	Construction Materials and Methods	
CEMT 4232	Construction Planning and Control	
CEMT 4233	Construction Cost Estimating	
CEMT 4234	Sustainable Construction	
CEMT 4236	Project Management Systems	
CEMT 4240	Building Information Modeling (BIM)	
CEMT 4242	Construction Safety	
CVEN 4025	Autocad Civil 3d & Advanced Civil Engineering Graphics	
CVEN 4077	Engineering Economy	
CVEN 4087	Engineering Contracts	
CVEN 4612	Traffic Impact Assessment	
CVEN 4621	Highway Capacity Analysis	
CVEN 4800	Special Topics	
CVEN 5111	Structural Dynamics	
CVEN 5333	Surface Water Hydrology	
CVEN 5381	Introduction to Geographic Information Systems	
Electives from outside of Civil Engineering		
BIOE 1020	Bioengineering Design and Prototyping II	
BIOL 2010	Organisms to Ecosystems (Gen Bio) [3]	
CHEM 2061	General Chemistry II [3]	
CSCI 1510	Logic Design [3]	
CSCI 2132	Circuits and Electronics [3]	
ELEC 1510	Digital Logic [3]	
ELEC 2132	Circuit Analysis I [3]	
ENVS 3082	Energy and the Environment	
ENVS 4740	Soil Science and Geography	
GEOL 1073	Physical Geology: Surface Processes [3]	
IWKS 3100	3D Design, Computation and Prototyping	
MATH 4820	Introduction to Mathematical Statistics	
MECH 3012	Thermodynamics	
PHYS 2711	Vibrations and Waves [3]	
PHYS 2811	Modern Physics I [3]	
URPL 3000	Planning the Built Environment	
URPL 4000	Planning History and Theory	
CU Denver Core Curriculum		
Select 24 Credits (https://catalog.ucdenver.edu/cu-denver/undergraduate/graduation-undergraduate-core-requirements/)		24
Total Hours		**130-133**

1. Students who take CHEM 2031 & CHEM 2038 to fulfill the chemistry requirement will need an additional semester hour to reach the 130 semester hours required for the degree.
2. Any 4000-level or higher CVEN or CEMT courses. Other math, science or engineering courses may be allowed with advisor approval.
3. A maximum of one lower-division course (level 1000-2999) may be applied to electives.

Note

Up to two 5000-level CVEN courses taken at CU Denver for the bachelor of science in civil engineering can be applied to a CU Denver civil engineering master's degree if relevant to the student's master's degree emphasis as determined by the students master's degree advisor.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Construction Engineering and Management, BS

Introduction

Please click here (p. 307) to see Civil Engineering department information.

The construction engineering and management bachelor of science at CU Denver is a new type of degree that offers the rigors of engineering problem-solving and design, coupled with construction management courses. Students receive an innovative interdisciplinary education that combines coursework in engineering, construction management, business and architecture. Graduates will find exciting, well-paid careers in the expanding and interconnected industry of architecture, engineering and construction as it embraces dynamic new concepts like smart cities, connected infrastructure and evolving value propositions.

The construction engineering and management bachelor of science degree supports the new construction knowledge area within the fundamentals of engineering exam. The program includes a solid foundation of construction engineering and management courses, an engineering focus/specialty area, and select courses from business, architecture and engineering. All students will complete a construction capstone design course, and students are required to complete at least 12 weeks of a full-time internship within the architecture, engineering or construction industry or government agency.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

- Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.

Code	Title	Hours
CU Denver Core Curriculum		
Select 24 credits		24
Architecture & Business		
ARCH 3330	Building Systems I	3
ARCH 4440	Building Systems II	3
BMIN 1000	Introduction to Business	3
Engineering		
CVEN 1025	Civil Engineering Graphics and Computer Aided Design	3
or MECH 1025	CAD and Graphics for Mechanical Engineering	
CVEN 2214 & CVEN 2215	Surveying for Engineering and Surveying Lab	2
or CVEN 2212	Surveying for Construction and Engineering	
ENGR 1200	Fundamentals of Engineering Design Innovation	3
or ARCH 1110	Introduction to Architecture	
ENGR 1100	Fundamentals of Computational Innovation	3
Construction		
CEMT 1000	Introduction to Construction Management	1
or CVEN 1067	Introduction to Civil Engineering	
CEMT 2100	Construction Management Fundamentals	3
CEMT 2300	Heavy Civil Construction and Equipment	3
CEMT 3100	Field Engineering and Management	3

CEMT 4067	Construction Senior Capstone	3
CEMT 4231	Construction Materials and Methods	3
CEMT 4232	Construction Planning and Control	3
CEMT 4233	Construction Cost Estimating	3
CEMT 4234	Sustainable Construction	3
CEMT 4236	Project Management Systems	3
CEMT 4240	Building Information Modeling (BIM)	3
CEMT 4242	Construction Safety	3
CEMT 4939	Internship (At least 3 months of internship (480 hours))	1
Engineering Specialty Science and Design		
Select 15 credits CSCI, CVEN, ELEC or MECH. All courses must be from the same specialty. [1]		15
Some examples of specialty course sequences are listed below		
Computer Science Focus		
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
CSCI 2421	Data Structures and Program Design	
3 Additional CSCI courses		
Electrical Focus		
ELEC 2132	Circuit Analysis I	
ELEC 2142	Circuit Analysis II	
ELEC 3164	Energy Systems	
ELEC 4184	Power Systems Analysis (Fullfills Design)	
Additional ELEC course		
Environmental Focus		
CVEN 3313	Fluid Mechanics	
CVEN 3323	Hydrosystems Engineering	
CVEN 3401	Introduction to Environmental Engineering	
CVEN 4426	Pipe Network and Sewer Design (Fullfills Design)	
CVEN 4427	Storm Water System Design (Fullfills Design)	
Mechanical Focus		
MECH 2023	Statics	
MECH 2033	Dynamics	
MECH 3010	Elementary Numerical Methods and Programming	
MECH 3012	Thermodynamics	
MECH 3021	Introduction to Fluid Mechanics	
MECH 3042	Heat Transfer	
MECH 4142	Thermal Systems Design (Fullfills Design)	
Structural Focus		
CVEN 2121	Analytical Mechanics I	
CVEN 3121	Mechanics of Materials	
CVEN 3141	Introduction to Structural Materials	
CVEN 3505	Structural Analysis	
CVEN 4575	Structural Steel Design (Fullfills Design)	
or CVEN 4585	Reinforced Concrete Design	
Transportation Focus		
CVEN 3602	Transportation Engineering	
CVEN 4602	Advanced Highway Design (Fullfills Design)	
CVEN 4612	Traffic Impact Assessment	
CVEN 4621	Highway Capacity Analysis	
CVEN 4650	Urban Street Design (Fullfills Design)	
Math and Science		
MATH 1401	Calculus I	4

MATH 2411	Calculus II	4
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I [2]	5
or ENGR 1130	Chemistry for Engineers	
PHYS 2311	General Physics I: Calculus-Based	4
PHYS 2321	Intro Experimental Phys Lab I	1
Select one of the following:		3
CVEN 3611	Engineering Statistics	
MATH 2830	Introductory Statistics	
MATH 3800	Probability and Statistics for Engineers	
ELEC 3817	Engineering Probability and Statistics	
BANA 2010	Business Statistics	
Select an additional 10 credits hours of math and science [2]		10
MATH 2421	Calculus III	
MATH 3191 & MATH 3200	Applied Linear Algebra and Elementary Differential Equations	
or MATH 3195	Linear Algebra and Differential Equations	
MATH 3301	Introduction to Optimization	
MATH 3382	Statistical Theory	
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & CHEM 2068	Molecules to Cells (Gen Bio) and General Chemistry Laboratory II	
CHEM 2061	General Chemistry II	
GEOL 1073 & GEOL 1074	Physical Geology: Surface Processes and Physical Geology: Surface Processes Laboratory	
PHYS 2331 & PHYS 2341	General Physics II: Calculus-Based and Intro Experimental Phys Lab II	
Elective		**3**
Any course listed above in Engineering Specialty Science and Design or Math and Science		
Or other course in math, science, architecture, business, engineering, construction or technical communication.		
Some options are:		
ACCT 2200	Financial Accounting and Financial Statement Analysis	
ARCH 2230	Architectural History I	
ARCH 3340	Theory of Structures I	
ARCH 3705	Advanced Human Centered Design, Innovation and Prototyping	
ARCH 4340	Theory of Structures II	
BIOL 3411	Principles of Ecology	
COMM 2050	Professional Presentations	
BLAW 3050	Business Law and Ethics	
COMM 2050	Professional Presentations	
CVEN 4025	Autocad Civil 3d & Advanced Civil Engineering Graphics	
CVEN 4077	Engineering Economy	
CVEN 4087	Engineering Contracts	
ELEC 1510	Digital Logic	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENVS 3082	Energy and the Environment	
GEOG 1602	Urban Studies and Planning	
GEOG 4080	Introduction to GIS	
IDST 4010	Foundations of STEM Communication	
LDAR 3601	Intro to Landscape Arch: Engaging Designed Landscape	
MECH 2024	Introduction to Materials Science	

SPAN 2110	Second Year Spanish I
SUST 3010	Sustainability: Past, Present, and Future
URPL 3000	Planning the Built Environment
URPL 4000	Planning History and Theory
Total Hours	**128**

[1] Students must meet with an advisor to determine an appropriate course sequence from the following areas:
- Civil Engineering (must take at least 1 design class)
- Computer Science
- Electrical Engineering (must take at least 1 design class)
- Mechanical Engineering (must take at least 1 design class)

[2] Students who take CHEM 2031 & CHEM 2038 to fulfill the chemistry requirement will need an additional semester hour to reach the 128 semester hours required for the degree.

[3] Specific math and science courses are prerequisites to some Engineering Specialty courses. Please consult with an advisor.

Note

Up to two 5000-level CEMT or CVEN courses taken at CU Denver for the BS can be applied to a CE Master's degree at CU Denver if relevant to the student's Master's degree emphasis as determined by the students Master's degree advisor.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Construction Management, BS

Introduction

Please click here (p. 307) to see Civil Engineering department information.

Construction management professionals combine knowledge of innovative technologies, construction practices and business management to lead a variety of construction projects, from residential, commercial and industrial buildings to infrastructure projects such as roads, bridges and large facilities. Construction managers orchestrate construction projects over their full life-cycle, managing schedules, budgets, quality and safety.

The bachelor of science in construction management at CU Denver includes a solid foundation of construction engineering and management courses, engineering courses and courses from the Business School and College of Architecture and Planning. All students will complete a construction capstone design course. In addition, the program requires the student to complete at least 12 weeks of a full-time internship with an architect, engineer, contractor industry or government agency.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.

Code	Title	Hours
CU Denver Core Curriculum		
Select 24 credits		24
Business		
BMIN 1000	Introduction to Business	3
BLAW 3050	Business Law and Ethics	3
Select three additional business courses from the following options:		9
Business Fundamentals Minor		
BMIN 3001	Fundamentals of Management and Marketing	
BMIN 3002	Fundamentals of Accounting and Finance	
BMIN 3004	Principles of Strategic Management	
Entrepreneurship Certificate [1]		
ENTP 3200	Essentials in Entrepreneurship	
ENTP 3230	Small Business Accounting and Finance	
ENTP 3299	Business Model Development & Planning	
Select three of the following:		
ACCT 2200	Financial Accounting and Financial Statement Analysis	
BANA 3000	Operations Management	
MGMT 3000	Managing Individuals and Teams	
MKTG 3000	Principles of Marketing	
MKTG 4700	Personal Selling and Sales Management	
Other courses with advisor approval		
Architecture		
ARCH 3330	Building Systems I	3
ARCH 3340	Theory of Structures I	3
ARCH 4340	Theory of Structures II	3
ARCH 4440	Building Systems II	3
Engineering		
CVEN 1025	Civil Engineering Graphics and Computer Aided Design	3
or MECH 1025	CAD and Graphics for Mechanical Engineering	
CVEN 2212	Surveying for Construction and Engineering	2
ENGR 1200	Fundamentals of Engineering Design Innovation	3
or ARCH 1110	Introduction to Architecture	
ENGR 1100	Fundamentals of Computational Innovation	3
or IWKS 2300	Fundamentals of Computational Innovation	
Construction		
CEMT 1000	Introduction to Construction Management	1
or CVEN 1067	Introduction to Civil Engineering	
CEMT 2100	Construction Management Fundamentals	3
CEMT 2300	Heavy Civil Construction and Equipment	3
CEMT 3100	Field Engineering and Management	3
CEMT 4067	Construction Senior Capstone	3
CEMT 4231	Construction Materials and Methods	3
CEMT 4232	Construction Planning and Control	3
CEMT 4233	Construction Cost Estimating	3
CEMT 4234	Sustainable Construction	3
CEMT 4236	Project Management Systems	3
CEMT 4240	Building Information Modeling (BIM)	3
CEMT 4242	Construction Safety	3
CEMT 4939	Internship (At least 3 months)	1
Math and Science		
Select one of the following math courses:		4-6
MATH 1130	Precalculus Mathematics	
MATH 1401	Calculus I	
MATH 1110 & MATH 1120	College Algebra and College Trigonometry	
PHYS 2010	College Physics I	4
PHYS 2321	Intro Experimental Phys Lab I	1
Statistics		
Select one of the following:		3
CVEN 3611	Engineering Statistics	
MATH 2830	Introductory Statistics	
MATH 3800	Probability and Statistics for Engineers	
ELEC 3817	Engineering Probability and Statistics	
BANA 2010	Business Statistics	
Electives		

Select 11 credits of elective courses in math, science, architecture, business, engineering, construction or technical communication.		11
Some example courses:		
ACCT 2200	Financial Accounting and Financial Statement Analysis	
ACCT 2220	Managerial Accounting and Professional Issues	
ARCH 1711	Architectural Visualization I	
ARCH 2230	Architectural History I	
ARCH 3340	Theory of Structures I	
ARCH 4340	Theory of Structures II	
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	
COMM 2050	Professional Presentations	
CVEN 3401	Introduction to Environmental Engineering	
CVEN 3602	Transportation Engineering	
CVEN 4025	Autocad Civil 3d & Advanced Civil Engineering Graphics	
CVEN 4077	Engineering Economy	
ECON 3366	Managerial Economics	
ELEC 1510	Digital Logic	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENGR 1130	Chemistry for Engineers	
ENVS 3082	Energy and the Environment	
GEOG 1602	Urban Studies and Planning	
GEOG 4080	Introduction to GIS	
GEOL 1073 & GEOL 1074	Physical Geology: Surface Processes and Physical Geology: Surface Processes Laboratory	
IDST 4010	Foundations of STEM Communication	
LDAR 3601	Intro to Landscape Arch: Engaging Designed Landscape	
MECH 1045	Manufacturing Processes Design	
MECH 2024	Introduction to Materials Science	
SPAN 2110	Second Year Spanish I	
SPAN 2120	Second Year Spanish II	
SUST 3010	Sustainability: Past, Present, and Future	
URPL 3000	Planning the Built Environment	
URPL 4000	Planning History and Theory	
Total Hours		**120-122**

[1] Could earn a minor in Entrepreneurship by taking 2 additional ENTP courses as technical electives

Note

Up to two 5000-level CEMT or CVEN courses may be applied to a civil engineering master's degree.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Construction Management Minor

Introduction

Please click here (p. 307) to see civil engineering department information.

Construction management involves the design, planning and management of the construction, maintenance and disposal of the built environment. This includes buildings, transportation systems, utilities and commercial, industrial, residential and environmental projects. Examples include highways, bridges, airports, buildings, dams, reservoirs, light and high-speed rail systems, hospitals, laboratories, residential communities, utilities and environmental restoration projects.

The construction management minor is designed for CU Denver undergraduates in engineering, architecture, business and other related disciplines who want to grow their skills and expertise in the fields of construction and engineering. The curriculum has been developed with the encouragement and review of a team of industry professionals and allows students to learn skills to facilitate entry into the construction industry.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 296) to go to information about declaring a minor.
- To enroll in the construction management minor, complete the top portion of the Construction Management Minor Coursework form (https://engineering.ucdenver.edu/docs/librariesprovider29/college-of-engineering-and-applied-science/civil-engineering/academic-program-documents/cm-minor-coursework-form-ay-20-21.pdf?sfvrsn=8918eab9_2). Email the form to civilengineering@ucdenver.edu or bring it to the Department of Civil Engineering office, located in North Classroom 3037.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. All courses must be taken in residence CU Denver (no transfer hours). A minimum 2.0 GPA is required for courses applied to this minor with no individual course grade below C- (1.7).

Code	Title	Hours
CEMT 2100	Construction Management Fundamentals	3
CEMT 4232/5232	Construction Planning and Control	3
Select one of the following		3-6
CEMT 4231/5231	Construction Materials and Methods	
ARCH 3130 & ARCH 3430	Construction Practices: Material and Structural Systems and Construction Practices: Building Envelope	
CEMT Electives		
Select one of the following		3
CEMT 2300	Heavy Civil Construction and Equipment	
CEMT 3100	Field Engineering and Management	
CEMT 4233/5233	Construction Cost Estimating	
CEMT 4234/5234	Sustainable Construction	
CEMT 4240/5240	Building Information Modeling (BIM)	
CEMT 4242/5242	Construction Safety	
CEMT 4236/5236	Project Management Systems	
or		
MGMT/ISMG 4900	Project Management and Practice	
Another CEMT 3000 level or above, by permission only		
Total Hours		**12-15**

Note: Students may take two 5000-level CEMT courses and later apply them to CEM master's degree.

Computer Science and Engineering

Chair: Gita Alaghband
Program Manager: Christina Ridd
Graduate Coordinator & Program Assistant: Megan Rogers
Office: Lawrence Street Center, 8th Floor
Telephone: 303-315-1408
Website: engineering.ucdenver.edu/cse (http://engineering.ucdenver.edu/cse/)

Overview

Mission Statement

With the advances in technology and the rapid and prevalent growth of the information-based economy, computer science has become an enabling science for nearly all disciplines that impact engineering, science, business, health and government. The future of the discipline promises even more innovative advances. The Department of Computer Science and Engineering at the University of Colorado Denver is committed to providing outstanding education and research training to our diverse undergraduate and graduate students for productive careers in industry, academia and government in the Denver metropolitan area, state and beyond. Our faculty strive for excellence in teaching, research and service by covering a broad spectrum of the discipline's core fundamentals, as well as applied aspects including those of interdisciplinary nature. We actively engage our students in classroom and out-of-classroom research and help them develop the skills needed to solve complex real-world technological problems of modern society.

Undergraduate Information

Computer Science Program

Computers as a combination of software and hardware have become significant to the whole of society. They affect the way in which business is conducted and the way people study and learn. Very important is the use of computers to develop new avenues of human communication, interaction and cooperation. Communication networks and the combination of text with audio and video are providing more people with fingertip access to a vast array of information and knowledge.

The computer scientist is a professional who must be prepared to apply his or her skills, knowledge and creativity in a rapidly changing field. The computer science program at CU Denver prepares students for such creative work. The emphasis is on fundamental concepts and basic principles with a long useful life. The program is composed of five major study areas: mathematics, basic or engineering science, required computer science, technical electives and the CU Denver core curriculum.

Bachelor of Science in Computer Science Curriculum

The mathematics, basic science and computer science core requirements give the student a broad exposure to the concepts, methods and practice of computer science and engineering; the student learns the fundamentals of producing solutions to problems.

Technical electives are chosen to add depth to a student's knowledge in an area of special interest.

The CU Denver undergraduate core curriculum is designed to give the student an exposure to knowledge outside his or her major. For students in the College of Engineering, Design and Computing, courses in the humanities, social sciences and human communications are required.

To be awarded the bachelor of science in computer science, a student must satisfactorily complete all course work shown in the curriculum below, satisfy all university graduation requirements and maintain at least a 2.0 GPA in all computer science courses attempted (see "Policy on Academic Progress" in the introductory section of this chapter). Students must meet with an undergraduate advisor each semester to assure that they are on track within the degree program and are aware of the current requirements of the program. An additional source of information is the CS Undergraduate Advising Handbook available online on the department's website. Students must complete a 30-hour checkout before registering for the last 30 semester hours of their program. In addition, each student must complete an approved graduation plan within the academic year of their intended graduation date. For advising policies, see the BS-CS handbook on our website.

The bachelor of science in computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET.

Note: Prerequisites must be taken before a course that requires them and be completed with a grade of C- or better. Co-requisites are to be taken concurrently. Prerequisites will be strictly enforced.

Computer Science Scholars Program: Dual BS/MS

The Computer Science (CS) Scholars Program provides high-performing and motivated undergraduate students the opportunity to begin graduate work at the master's level while completing the undergraduate degree in CS. In the process, it allows students to receive dual credit for up to 12 hours of graduate-level computer science courses for both the Bachelor of Science (BS) and the Master of Science (MS) degree. This accelerates the time to obtain a graduate degree for the student, saving both time and expense.

Program Guidelines

Students admitted into the CS Scholars Program will be allowed to take 5000-level courses in computer science while still completing their undergraduate degree in computer science. CS Scholars are allowed to apply up to 12 credit hours (4 courses) of 5000-level courses toward both their BS degree in computer science, as technical electives, and their MS degree in computer science.

The following guidelines are applied to students in the BS Scholars Program:

- Dual credit CSIS 5000-level courses must be taken at CU Denver and must be courses selected from category A or B as required by the MS degree in computer science (outlined in the CU Denver computer science Graduate Handbook).
- Students must score a B- or higher in their 5000-level computer science courses for the course to be applied toward the MS degree. A passing grade below a B- will contribute to the BS degree requirements, but not to the MS degree requirements.
- Students cannot apply more than 12 credit hours of graduate coursework to the MS degree taken prior to the completion of the BS degree.
- Students must apply for the CS Scholars Program before their final year of courses to receive dual credit for 5000-level courses. Students

will be considered undergraduate students until all requirements for the BS degree in computer science are completed.

- The BS degree will be conferred the semester during which these requirements are completed. At that time, students will also be considered an MS student. Students then continue to fulfill the remaining requirements for their MS degree in computer science (thesis option or project option or course only option). CS Scholars are expected to finish their MS degree in 2 semesters upon completion of their BS degree (course only option), plus a summer session for students pursuing an MS project or thesis.

Admission Requirements

- Must be a full-time undergraduate student in computer science at CU Denver in good standing, with a minimum of 60 credit hours completed toward the BS degree in computer science, and must have completed CSCI 3412 Algorithms, CSCI 3453 Operating System Concepts, and CSCI 3287 Database System Concepts.
- Must have a minimum cumulative GPA of 3.3 or a 3.5 GPA in CS major coursework.
- Must complete an application to the CS Scholars Program, including a dual degree course plan. The application must be approved by the student's CS academic advisor and submitted to the CS department.
- Must apply and be accepted into the CU Denver MS program in computer science for the semester during which they will enter the CS Scholars Program dual-credit program.

Bachelor of Arts Computer Science Curriculum

The mathematics, basic science, computer science core requirements and computer science technical electives give the students a solid foundation in computer science; the student learns the fundamentals of computational thinking.

Students are encouraged to focus their free electives towards their area of interest to earn a certificate, minor or double major. The bachelor of arts in computer science is modeled as CS+X where X is a component of the degree consisting of 38 credit hours that students can use to pursue their passion in a different field toward a minor, double major, or even additional CS education. The program shares the same computer science courses as the BS in CS with fewer math and CS requirements. Students can use the 38 credits of free electives in fields such as graphic design, mechanical engineering, marketing, biology, physics, architecture, entrepreneurship, business, communications and any other subject offered at CU Denver. The program is composed of five major study areas: mathematics, basic science, required computer science, technical electives, free electives and the CU Denver core curriculum.

The CU Denver undergraduate core curriculum is designed to give the student an exposure to knowledge outside his or her major. For students in the College of Engineering, Design and Computing, courses in the humanities, social sciences and human communications are required.

To be awarded the bachelor of arts in computer science, a student must satisfactorily complete all course work shown in the curriculum below, satisfy all university graduation requirements and maintain at least a 2.0 GPA in all computer science courses attempted (see "Policy on Academic Progress" in the introductory section of this chapter). Students must meet with an undergraduate advisor each semester to assure that they are on track within the degree program and are aware of the current requirements of the program. An additional source of information is the BA-CS Undergraduate Advising Handbook available online on the department's website. Students must complete a 30-hour checkout before registering for the last 30 semester hours of their program. In addition, each student must complete an approved graduation plan within the academic year of their intended graduation date. For advising policies see BA-CS Handbook.

Note: Prerequisites must be taken before a course that requires them. Co-requisites are to be taken concurrently. Prerequisites will be strictly enforced.

Computer Science Scholars Program: Dual BA/MS

The Computer Science (CS) Scholars Program provides high-performing and motivated undergraduate students the opportunity to begin graduate work at the master's level while completing the undergraduate degree in CS. In the process, it allows students to receive dual credit for up to 12 hours of graduate-level computer science courses for both the Bachelor of Arts (BA) and the Master of Science (MS) degree. This accelerates the time to obtain a graduate degree for the student, saving both time and expense.

The following guidelines are applied to students in the BA Scholars Program:

- If accepted, students remain in an Undergraduate status until receiving their BA degree, then move into a Graduate status with an intent of completing the MS in Computer Science within a year.
- Students can take up to four graduate courses while in an Undergraduate status.
- Complete the following courses while in undergraduate status including all pre-requisites: CSCI 3453 Operating System Concepts, CSCI 4591 Computer Architecture, MATH 2411 Calculus II and MATH 3195 Linear Algebra and Differential Equations.
- Students must meet with a CS Graduate advisor within a semester of acceptance into the Dual BA/MS Program.
- Students with a prior associates or bachelor degree completing the BACS may apply for the Dual BA/MS Program their last semester.

To apply for the Dual BA/MS Program, students must:

- Be a full-time undergraduate student in computer science at CU Denver in good standing, with a minimum of 60 credit hours completed toward the BACS degree.
- Complete the following courses: MATH 2411 Calculus II, CSCI 3412 Algorithms, CSCI 3453 Operating System Concepts, and CSCI 3287 Database System Concepts.
- Commit to completing the following two courses while in undergraduate status: CSCI 4591 Computer Architecture and MATH 3195 Linear Algebra and Differential Equations.
- Have a minimum cumulative GPA of 3.3 or a 3.5 GPA in CS major coursework.

Undergraduate Certificate in Cybersecurity and Secure Computing

The goal of the undergraduate certificate of Cyber Security & Secure Computing program is to reduce vulnerability in the national information infrastructure by promoting higher education and research to help prepare cyber defense professionals for careers in both the public and the private sector. The curriculum of this certificate has been created to

meet all criteria of NICE (National Initiative for Cybersecurity Education) undergraduate level of certification.

Certificate Objectives

This certificate program focuses on both the technical and analytical aspects of advanced cyber security and defense.

Program Objectives

- Master the fundamental concepts of cyber security principles and techniques.
- Learn about potentials for cyber security threats and attacks.
- Master cyber-defense tools, methods, and components to secure systems.
- Learn how to take appropriate measures should a system compromise occur.
- Learn principles and practices for secure computing

Learning Outcomes

- Be able to describe and apply the fundamental concepts of cyber security principles and techniques.
- Be able to analyze potential cyber threats and attacks.
- Be able to use cyber defense tools, methods, and components to properly secure systems.
- Be able to effectively and quickly evaluate and mitigate if systems are threatened or compromised.

Certificate Eligibility

Current students in good standing in an undergraduate computer science program (BA or BS), and those completing their minor in computer science are eligible. Applications from other CU Denver majors or non-degree students will be evaluated based on their current transcript. The student's application is subject to the approval of the computer science and engineering department chair.

Students planning to pursue a Cybersecurity & Secure Computing Certificate in Computer Science and Engineering should apply as early as possible to facilitate course planning, and no later than census date of the semester prior to graduation with their undergraduate degree.

Process to Attain Certificate Objectives

The following classes need to be taken with a grade of C- or better:

Code	Title	Hours
CSCI 3761	Introduction to Computer Networks	3
CSCI 3453	Operating System Concepts	3
CSCI 4034	Theoretical Foundations of Computer Science	3
CSCI 4741	Principles of Cybersecurity	3
CSCI 4743	Cyber and Infrastructure Defense	3
Total Hours		**15**

Students must take and pass each course with a grade of C- or better. The Cybersecurity & Secure Computing Certificate requires a minimum cumulative GPA of 2.0.

Programs

- Computer Science, BA (p. 338)
- Computer Science, BS (p. 340)
- Computer Science Minor (p. 342)
- Cybersecurity, BS (p. 343)
- Cybersecurity and Secure Computing Undergraduate Certificate (p. 346)

The Department of Computer Science and Engineering offers BA, BS, MS, and PhD degrees, as well as a minor and several certificates:

- The undergraduate BS degree (p. 340) is awarded in computer science (CS) and is ABET accredited. This curriculum is a rigorous study covering theoretical, software, systems and hardware interfaces providing students with a coherent and in-depth education of key components of the field.
- The **Computer Science Scholars Program** (dual BA/MS or BS/MS) provides high-performing and motivated undergraduate students the opportunity to begin course work at the graduate level while completing the undergraduate degree in CS. In the process, it allows students to receive dual credit for up to 12 credits of graduate-level CS courses for both the bachelor of science (BS)/bachelor of arts (BA) and the master of science (MS).
- The undergraduate BA degree (p. 338) is awarded in computer science (CS). It offers a flexible degree program designed with a modular approach that allows students to combine their computer science education with another academic field of their interest.
- The undergraduate certificate of Cybersecurity & Secure Computing (p. 346) is designed for students pursuing an undergraduate degree and will help prepare to be cyber defense professionals for careers in both the public and the private sector.
- The **MS degree** is awarded in computer science to those students who wish to pursue graduate studies to further develop their education. The MS in CS graduate program covers the core knowledge of key concepts of computer science as well as offers flexibility to pursue specializing in various fields of interests.
  - A track in **Data Science in Biomedicine** is offered as a MS thesis option. Students who choose this track will adopt biomedical applications of data science to learn data science methodologies and technologies.
- The **graduate certificate in software engineering** is designed for working professionals, or computer science students beginning their careers, who are in the field of software engineering and/or software development.
- The **graduate certificate in cybersecurity & defense** is designed for working professionals in the field of computer science, network and/or security operations. The certificate program in Cyber Security and Defense will prepare Computer Science professionals to identify, analyze, and mitigate technical cybersecurity-related vulnerabilities, exploits and attacks against network and critical cyber infrastructure.
- The **Computer Science and Information Systems (CSIS) PhD** is awarded by the College of Engineering, Design and Computing.
- The multidisciplinary **Engineering and Applied Science PhD** degree is available through the Department of Computer Science and Engineering.
- Any undergraduate student currently enrolled in a CU Denver degree program with a major other than computer science may earn a minor in computer science (p. 342). This includes students from the College of Engineering, Design and Computing, the College of Liberal Arts and Sciences, the School of Public Affairs, the College of Arts & Media, and the School of Education & Human Development.

The most up-to-date information on all programs offered through the computer science and engineering department can be obtained from the department's website at engineering.ucdenver.edu/cse (http://

engineering.ucdenver.edu/cse/). Please also see our Graduate Catalog for more details regarding these programs.

Faculty

Professors:

Gita Alaghband, PhD, University of Colorado
Research areas: parallel and distributed systems, parallel algorithms, applications and languages, high-performance computing

Tom Altman, PhD, University of Pittsburgh
Research areas: algorithms, optimization, theory

Min-Hyung Choi, PhD, University of Iowa
Research areas: computer graphics, animation, virtual reality, human computer interface

Douglas Sicker, PhD, University of Pittsburgh
Research areas: cybersecurity and wireless systems

Professor (Clinical Teaching Track):

Dave Ogle, PhD, Ohio State University
Research areas: networks

Associate Professors:

Farnoush Banaei-Kashani, PhD, University of Southern California
Research areas: big data management, big data mining, data science, geospatial data analysis, data stores (NewSQL)

Ellen Gethner, PhD, University of British Columbia; PhD, Ohio State University
Research areas: graph theory, number theory, combinatorics, discrete geometry, computational geometry, visualization, algorithms

Ilkyeun Ra, PhD, Syracuse University
Research areas: computer networks, cloud computing, high-performance computing, distributed computing systems

Assistant Professors:

Mazen Al Borno, PhD, University of Toronto
Research areas: health technology, computational models of human movement for applications in motor neuroscience, rehabilitation, wearable technology and robotics

Ashis Biswas, PhD, University of Texas at Arlington
Research areas: machine learning, data mining, big data analysis, bioinformatics

Liang He, PhD, Nankai University
Research areas: cyber-physical systems, cognitive battery management, IoTs, mobile computing

Haadi Jafarian, PhD, University of North Carolina Charlotte
Research areas: proactive security for cyber threats, big data analytics for cyber threat intelligence, security for cyber-physical systems & critical infrastructures, security for IoTs, security analytics & automation, science of security

Zhengxiong Li, PhD, SUNY Buffalo
Research areas: Internet of Things, cybersecurity, emerging technologies and applications

Assistant Professors (Clinical Teaching Track):

Madhuri Debnath, PhD, University of Texas at Arlington
Research areas: data mining, spatio-temporal data analysis, data science, machine learning

Salim Lakhani, PhD, Purdue University
Research areas: cloud computing and security, distributed computing & database systems

Javier Pastorino, PhD, University of Colorado Denver
Research areas: artificial intelligence, cybersecurity, privacy & awareness, and machine learning

Senior Instructors (Clinical Teaching Track):

Sung-Hee Nam, MS, University of Colorado Boulder
Research areas: programming languages and distributed systems

Diane Ricciardella, MS, University of Colorado Denver
Research areas: artificial intelligence, linguistic geometry, natural language processing

Professors Emeriti:

Boris Stilman, PhD, National Research Institute for Electrical Engineering, Moscow, Russia

Computer Science (CSCI)

CSCI 1001 - Computer Forensics I (3 Credits)
Topics covered: how to conduct a computer forensic exam; how an individual can hide data on a computer; how the investigator can find that hidden data.This course will also incorporate hands-on learning through the use of a forensic software package.(Non-CS majors) Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CVEN 1200, ENGR 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1350 - Introduction to Computing in Society (3 Credits)
This is an introductory course for individuals who would like to learn about the field of computer science, how modern computing is affecting society, and the basics of computer programming. We will explore how computing has changed society, how intertwined in our daily lives computer programs have become, and how these programs are created. We will explore these topics while learning the basics of computer programming with a modern programming language. Prereq: High School Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab.

CSCI 1410 - Fundamentals of Computing (3 Credits)
First course in computing for those who will take additional computer science courses. Covers the capabilities of a computer, the elements of a modern programming language, and basic techniques for solving problems using a computer. Coreq: CSCI 1411. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: CSCI 1411.

CSCI 1411 - Fundamentals of Computing Laboratory (1 Credit)
This laboratory is taken with CSCI 1410 and will provide students with additional help with problem solving and computer exercises to compliment the course material covered in CSCI 1410. Coreq: CSCI 1410. Max Hours: 1 Credit.
Grading Basis: Letter Grade
D-En CO: CSCI 1410 coreq

CSCI 1510 - Logic Design (3 Credits)
The design and analysis of combinational and sequential logic circuits. Topics include binary and hexadecimal number systems, Boolean algebra and Boolean function minimization, and algorithmic state machines. Lecture/lab includes experiments with computer-aided design tools. This course requires the level of mathematical maturity of students ready for Calculus I. Max hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1800 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CSCI 2002 - Computer Forensics II (3 Credits)
This is a continuation of CSCI 1001 This course will cover: computer forensics for advanced operating systems (Mac, Linux, and Unix) and mobile device forensics. This course will incorporate hands-on-learning by utilizing a computer forensics software package. (Non CS majors) Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 1001

CSCI 2132 - Circuits and Electronics (3 Credits)
This course is designed to serve as the basic course in CSE curriculum for second year bachelor students. It introduces the fundamentals of the analog and digit circuit abstraction and applications. Topics include: resistive elements, networks, sources, switches, MOS transistors, digital abstraction, amplifiers, energy storage elements. A web-based laboratory will allow students to have hands-on experiments. Prereq: MATH 2411, PHYS 2331, and CSCI 1510. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 1510, MATH 2411, and PHYS 2331

CSCI 2312 - Object Oriented Programming (3 Credits)
Programming topics in a modern programming language. The emphasis is on problem solving using object oriented and Generic Programming. Topics include advanced I/O, classes, inheritance, polymorphism and virtual functions, abstract base classes, exception handling, templates, and the Standard Template Library. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411

CSCI 2421 - Data Structures and Program Design (3 Credits)
Topics include a first look at an algorithm, data structures, abstract data types, and basic techniques such as sorting, searching, and recursion. Programming exercises are assigned through the semester. Prereq: CSCI 2312 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2312 with a grade of C- or higher.

CSCI 2511 - Discrete Structures (3 Credits)
Covers the fundamentals of discrete mathematics, including: logic, sets, functions, asymptotics, mathematical reasoning, induction, combinatorics, discrete probability, relations and graphs. Emphasis on how discrete mathematics applies to computer science in general and algorithm analysis in particular. Prereq: MATH 1401 with a C- or higher (Calculus I). Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher

CSCI 2525 - Assembly Language and Computer Organization (3 Credits)
Topics include computer architecture, program execution at the hardware level, programming in assembly language, the assembly process, hardware support of some high-level language features, and a program's interface to the operating system. Programming exercises are assigned in this course. These exercises involve the use of specific hardware in designated laboratories. Prereq: Grade of C- or higher in the following courses: CSCI 1410, CSCI 1411 and CSCI 1510. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410, CSCI 1411 and CSCI 1510.

CSCI 2571 - Fundamentals of UNIX (3 Credits)
Introduces the UNIX operating system and its family of related utility programs. History and overview, versions, and common features. File operations, utilities, shells, editors, filters and data manipulation. Shell programming communications and networking, windowing environments, mail and Internet. Programming tools. Simple system administration. Credit will not count toward BSCSE degree. Prereq: Familiarity with operating systems and/or a programming course. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 2800 - Special Topics (3 Credits)
Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 2940 - NAND to Tetris: Foundations of Computer Systems (3 Credits)
Introduces the principles of computer systems that underlie the global information age. Starting from first principles, students gradually construct a simple hardware platform and a modern software hierarchy, yielding a working basic yet powerful computer system. Only introductory programming experience is required. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 3300. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 2941 - Game Design and Development I (3 Credits)
Introduces principles of computer game development, building on the rich interplay of computer science, graphics design, physics, music, and narrative. Students develop interactive 2D and 3D games and a final project. Substantial software development involved, but requires only introductory programming experience. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 3400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 2942 - IoT: The Internet of Things (3 Credits)
In a world where everything is connected to everything else, how does that work? This course introduces techniques for (1) designing systems that can sense the environment and respond to humans in meaningful ways and (2) creating networks of physical objects that collect and exchange data. Such systems might include wearable sensors, interactive art, and Internet-connected home devices. Working individually and in teams, students will develop projects using Inworks' materials, devices, and fabrication tools. The course involves considerable prototyping and software development but requires only introductory programming and prototyping experience. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 4120. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 3287 - Database System Concepts (3 Credits)
Introduces database design, database management systems, and the SQL standard database language. Includes data modeling techniques, conceptual database design, theory of object-relational and relational databases, relational algebra, relational calculus, normalization and database integrity. Prereq: Grade of C- or higher in the following courses: ENGL 1020 and CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: ENGL 1020 and CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3320 - Advanced Programming (3 Credits)
The course will cover a wide range of advanced programming topics via focusing on development of cross-platform applications.The focus will be on problem solving and developing applications with modern languages (such as C++, Java, Objective-C) & frameworks, including Xcode, Angularjs (with Javascript, HTML5, CSS), Phonegap, & Webstorm. Prereq: CSCI 2421. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421 with a C- or higher.

CSCI 3412 - Algorithms (3 Credits)
Design and analysis of algorithms. Asymptotic analysis as a means of evaluating algorithm efficiency. The application of induction and other mathematical techniques for proving the correctness of an algorithm. Data structures for simplifying algorithm design, such as hash tables, heaps and search trees. Elementary graph algorithms. Assignments include written work and programming projects. Prereq: Grade of C- or higher in the following courses: CSCI2421 and 2511. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 2421 and 2511. Restricted to Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3415 - Principles of Programming Languages (3 Credits)
Introduces programming language design concepts and implementation issues. Includes language concepts such as control structures and data types, formal language specification techniques, and syntactic and semantic implementation issues. Prereq: Grade of C- or higher in the following courses: CSCI 2421 and CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 2421 and CSCI 2525. Restricted to undergraduate Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3453 - Operating System Concepts (3 Credits)
Covers the principles of computer operating systems and the essential components of an operating system. Topics include: I/O devices, file systems, CPU scheduling and memory management. Prereq: Grade of C- or higher in the following courses: CSCI 3412 and CSCI 2525. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 3412 and CSCI 2525. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 3508 - Introduction to Software Engineering (3 Credits)
Introduces principles and practices of software engineering: software life-cycle models, requirements engineering, analysis and design tools, human factors risk management, program certification, project management and intellectual property rights. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 3511 - Hardware-Software Interface (3 Credits)
Hardware and software techniques needed to control and program device interfaces. Input and output devices, computer peripherals, device drivers and interfaces are introduced. Specific programmable devices are used in class projects. Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3515 - Internet of Things: Sensing, Communication & Control (3 Credits)
The Internet of Things (IoT) is transforming our physical world into a complex and dynamic system of connected devices on an unprecedented scale. This course covers the basic components of IoT systems: sensing, communication, control, and power supply, as well as case studies on the design of real-world IoT applications, including voice authentication, activity monitoring, and battery management. This course integrates both the theories/science of IoTs and their hands-on implementation, as well as the basic practice of data collection, processing, analysis, and visualization. Prereq: CSCI 2421 with a C- or higher. Restriction: Restricted to Computer Science majors and minors (CSCI-BS, CSCS-BA, and CSCI-MIN). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421 with a C- or higher. Restriction: Restricted to Computer science majors and minors (CSCI-BS, CSCS-BA, and CSCI-MIN)

CSCI 3560 - Probability and Computing (3 Credits)
Events and probability. Discrete random variables. Moments of random variables. Conditional probability and expectation. The probabilistic method. Markov chains and random walks. Continuous distributions and the Poisson process. Entropy, randomness and information. Randomized algorithms. Prereq: Grade of a C- or higher in CSCI 2511 and MATH 2411. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of a C- or higher in CSCI 2511 and MATH 2411. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3740 - Computer Security (3 Credits)
Introduces basic knowledge from the computer security area. Topics covered in this course include: Cybersecurity Ethics, Penetration Testing, Secure Programming Practices, and Life-Cycle Security. Students will gain the understanding of ethics in cybersecurity with the tools for ethical decision making, learn methods of exploiting vulnerabilities and perform penetration testing on a simple network, understand the characteristics of secure programming with the ability to implement programs that are free from vulnerabilities, and understand security related concerns in a system Life-Cycle and how security principles can be applies to improve security throughout a system. Prereq: CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3751 - Fundamentals of UNIX (3 Credits)
Introduces the UNIX/Linux operating system and its family of related utility programs. History and overview, versions, and common features. Common basic commands, file and process operations, utilities, shells, intro the vi editor, filters, and data manipulation. Shell programming communications and networking, windowing environments (X window). Programming tools (gdb). Simple system administration. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.
Typically Offered: Fall.

CSCI 3761 - Introduction to Computer Networks (3 Credits)
Introduction and overview of computer networks. Topics include Internet protocols, network devices, network security, and performance issues. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 3762 - Network Programming (3 Credits)
Network Programming. This class involves creating and implementing networking protocols that help students delve deeper into the concepts introduced in CSCI 3761. The course requires hands on sockets-based programming at the TCP and UDP level. The course explores and focuses on real-world networking problems. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.
Typically Offered: Spring.

CSCI 3800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to Computer Science Majors and Minors (CSCS-BA, CSCI-BS, CSCI-MIN, CMSC-MS)

CSCI 3810 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Credit will not count toward BS Computer Science degree. Restriction: Restricted to BA Computer Science Majors (CSCS-BA). Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to BA Computer Science Majors.
Typically Offered: Fall, Spring.

CSCI 3840 - Independent Study: CSCI (1-3 Credits)
Restriction: Restricted to undergraduate Computer Science Majors and Minors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to undergraduate Computer Science Majors and Minors.

CSCI 3916 - Web API (3 Credits)
JavaScript Web technologies for front-end development and back-end development. Building a full end to end solution with a mobile or web front-end, Web API and NoSQL database. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors

CSCI 3920 - Advanced Programming with Java and Python (3 Credits)
This course introduces the fundamental concepts to develop programs and projects using modern software engineering techniques using two different programming languages (Java and Python). It will cover and apply pattern design approaches, reusable components driven by everyday needs within many software developments, the relationships between object oriented programming concepts and software design concepts. It will dig deeper into techniques to program single threaded applications as well as advanced techniques to construct concurrent and distributed applications. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors

CSCI 3963 - Network Structures (3 Credits)
This interdisciplinary course examines how the technological, social and economic worlds are connected and how the study of networks sheds light on these connections. Topics include: how opinions spread through society; the robustness and fragility of financial networks; the technology and economics of Web information and on-line communities. Prereq: Grade of C- or higher in MATH 2411. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 2411. Restricted to Computer Science Majors and Minors.

CSCI 4034 - Theoretical Foundations of Computer Science (3 Credits)
Introduces abstract models for computation, formal languages and machines. Topics include: automata theory, formal languages, grammars and Turing machines. Prereq: Grade of C- or higher in CSCI 3412. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 4110 - Applied Number Theory (3 Credits)
Every year, Topics include divisibility, prime numbers, congruences, number theoretic functions, quadratic reciprocity, special diophantine equations, cryptography, computer security, and engineering applications. Cross-listed with CSCI 5110. Prereq: Grade of C- or higher in one of the following courses: MATH 3000 or CSCI 2511. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3000 or CSCI 2511. Restricted to Computer Science Majors and Minors.

CSCI 4172 - Complexity and Problem Solving (3 Credits)
Theoretical and practical aspects of solving complex problems, in particular, but not limited to, NP-complete and PSPACE-complete problems. Various heuristic and approximation algorithms, including greedy, ant, and Genetic Algorithms will be studied. This course is by instructor's permission only. Prereq: Grade of C- or higher in CSCI 4034. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4034. Restricted to Computer Science Majors and Minors.

CSCI 4173 - Computational Complexity and Problem Solving (3 Credits)
Solid, in-depth theoretical foundation in computing, computational complexity, and algorithmics. Additional topics include various algorithms for both discrete and non-discrete problem domains. Models of Computation, Computational Complexity, Time Complexity Classes, Space Complexity Classes, The Theory of NP-completeness. Prereq: Grade of C- or higher in CSCI 4034. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4034. Restricted to Computer Science Majors and Minors.

CSCI 4202 - Introduction to Artificial Intelligence (3 Credits)
Topics include heuristic search, games playing algorithms, application of predicate calculus to AI, introduction to planning, application of formal grammars to AI. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4203 - Simulation (3 Credits)
This class in simulation spans three different disciplines: Computer Science, Modeling and Simulation, and Analysis. These will have approximately equal weight with respect to this class, but with more breadth in the Modeling and Simulation and Analysis disciplines and more depth in the supporting Computer Science topics. Excursions are planned for agent-based simulations, knowledge-based simulations, and animation and visualization of simulation results. Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science majors and minors. Cross-listed with CSCI 5203. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).
Typically Offered: Fall.

CSCI 4211 - Mobile Computing and Programming (3 Credits)
This course contains two main simultaneous tracks, namely mobile computing and mobile programming. A series of lectures on various aspects of mobile computing provides an understanding of challenges and solutions in design and implementing mobile systems. The main topics include mobile sensing, human mobility and its technical implication. Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4220 - Social Networks & Informatics (3 Credits)
The main topics covered by the course will include 1) social network data structures, 2) basic random graph models and graph algorithms; 3) recommendation systems and predictive models 4) query suggestion and content analysis 5) link analysis and community detection 6) the spread of information, disease, and influence on networks. This course builds a solid foundation in social informatics technology. Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Cross-listed with CSCI 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Programs restricted to: CSCI-BS, CSCS-BA, CSCI-MIN.

CSCI 4287 - Embedded Systems Programming (3 Credits)
Embedded Systems Programming happens across a spectrum of Domains. Embedded Systems Programming in the Small is characterized by the creation of small applications in high volumes. Embedded Systems Programming in the Large is characterized by the creation of medium to large applications in one-off or low volumes using specialized Operating Systems such as Real-time Operating Systems. Students will current languages, and are expected to have basic Operating Systems understanding. Prereq: Graded with C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4407 - Security & Cryptography (3 Credits)
A broad overview of cryptography and its relation to computer security. Topics include basic standard cryptographic techniques, a history of codes and ciphers, RSA, DES, AES, Elliptic Curve Cryptography, ElGammal, and applications to current and future technologies. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Cross-listed with CSCI 5407. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4408 - Applied Graph Theory (3 Credits)
Introduces discrete structures applications of graph theory to computer science, engineering and operations research. Topics include connectivity, coloring, trees, Euler and Hamiltonian paths and circuits. Matching and covering problems, shortest route and network flows. Prereq: Grade of C- or higher in one of the following courses: MATH 3000 or CSCI 2511. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3000 or CSCI 2511. Restricted to Computer Science Majors and Minors.

CSCI 4411 - Computational Geometry (3 Credits)
Many practical and aesthetic algorithmic problems have their roots in geometry. Applications abound in the areas of computer graphics, robotics, computer-aided design, and geographic information systems, for example. A selection of topics from convex hull, art gallery problems, ray tracing, point location, motion planning, segment intersection, Voronoi diagrams, visibility and algorithmic folding will be covered. Cross-listed with CSCI 5411. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4455 - Data Mining (3 Credits)
Introduces concepts, techniques and methodologies to discover patterns in data. Topics include (but are not limited to) data preprocessing and cleansing, data warehousing, pattern mining, classification, prediction, cluster analysis, outlier detection, and online data analytics. Prereq: Grade of C- or higher in the following coures: MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5455. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4501 - Java (3 Credits)
Comprehensive course on Java programming. Coverage of programming language constructs of Java and the core libraries that come with Java: coverage of advanced topics, including technologies for building distributed applications, and interacting with a database. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restricted to Computer Science Majors and Minors.

CSCI 4551 - Parallel & Distributed Computing (3 Credits)
Examines a range of topics involving parallel and distributed computing. Topics include language constructs for concurrency, work distribution, synchronization, and communication. Throughout, design of example scientific computing algorithms for parallel and distributed computation will be introduced. Prereq: Grade of C- or higher in Math 3195 (or both MATH 3191 and MATH 3200), CSCI 3415 & CSCI 3453. Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in Math 3195 (or both MATH 3191 and MATH 3200), CSCI 3415 CSCI 3453. Restricted to Computer Science Majors and Minors.

CSCI 4555 - Compiler Design (3 Credits)
Introduces the basic techniques used in translating programming languages: scanning, parsing, symbol table management, code generation, code optimization and error recovery. Prereq: Grade of C- or higher in CSCI 3412 and CSCI 3415. Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412 and CSCI 3415. Restricted to Computer Science Majors and Minors.

CSCI 4565 - Introduction to Computer Graphics (3 Credits)
Introduces two and three dimensional computer graphics. Topics include scan conversion, geometric primitives, transformation, viewing, basic rendering, and illumination. Emphasis is on programming using "C" and "C ++" Open GL. Prereq: Grade of C- or higher in CSCI 3412 and (MATH 3191 or MATH 3195). Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5565. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: Grade of C- or higher in CSCI 3412 and (MATH 3191 or MATH 3195). Restricted to Computer Science Majors and Minors.

CSCI 4570 - Virtual and Augmented Reality (3 Credits)
This course covers the fundamental concepts and technologies of virtual and augmented reality, and it introduces recent advances in the field. Topics include 3D user interaction, immersive environments, tele-presence, mobile AR, human perception, and VR/AR applications. Restricted to computer science majors and minors. Pre-requisite: CSCI 3412. Cross-listed with CSCI 5570. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Programs restricted to: CSCI-BS, CSCS-BA, CSCI-MIN.

CSCI 4580 - Data Science (3 Credits)
Introduces concepts and techniques that enable data cycle from data extraction to knowledge discovery, including but not limited to data exploration, hypotheses testing, data organization, data featurization, supervised and unsupervised data modeling and learning, scaling-up analytics, and data visualization. Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors & Minors. Cross-listed with CSCI 5580. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4591 - Computer Architecture (3 Credits)
Deals with how assembly language maps to hardware, and basic hardware techniques implemented in computers. Topics include logic design of arithmetic units, data control path processor logic, pipelining, memory systems, and input-output units. The emphasis is on logic structure rather than electronic circuitry. Students must know basic control logic design and be familiar with an assembly language before taking this course. Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors.

CSCI 4620 - Computational Motor Control (3 Credits)
This course introduces techniques for the modeling, simulation and control of movement. These techniques come from computer graphics, robotics and machine learning. The topics that we will cover include robot modeling, trajectory optimization, feedback control, deep reinforcement learning, the neuroscience of movement, and neural network models of the brain. At the end of the course, students will learn how train control policies for virtual agents in computer animation or robotics applications. Prereq: Grade of C- or higher in CSCI 3412 & familiarity with Linear Algebra. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4630 - Linguistic Geometry (3 Credits)
Linguistic Geometry (LG) is a type of Game Theory in Artificial Intelligence, which permits to overcome combinatorial explosion and generate optimal strategies in real time. LG is currently changing the paradigm of military command and control in the USA and abroad. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5619. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4640 - Universal Compiler: Theory and Construction (3 Credits)
Theoretical foundations and step-by-step hands-on experience in the development of a compiler, which can tune itself to a new programming language. This is a must-take course for future software developers as well as those interested in applications of the theory of Computer Science. Cross-listed with CSCI 5640. Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4650 - Numerical Analysis I (3 Credits)
A first semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Rounding errors and numerical stability of algorithms; solution of linear and nonlinear equations; data modeling with interpolation and least-squares; and optimization methods. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CSCI 1410). Prereq: MATH 3191 or MATH 3195 with a C- or higher. Cross-listed with CSCI 5660, MATH 4650, and MATH 5660. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 or MATH 3195 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

CSCI 4660 - Numerical Analysis II (3 Credits)
A second semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Numerical differentiation and integration; random numbers and stochastic modeling; Fast Fourier Transform; data compression; eigenvalues and singular value decompositions with application to regression and dimension reduction. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CS 1410). Restricted to Computer Science Majors. Cross-listed with CSCI 5661, MATH 4660 and 5661. Term offered; fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), MATH or CSCI 4650 or 5660 and programming experience. Restricted to Computer Science Majors.
Typically Offered: Fall.

CSCI 4702 - Big Data Mining (3 Credits)
Introduces techniques to discover patterns in Big Data. Selected topics: scalable high-dimensional data clustering, scalable dimensionality reduction, locality sensitive hashing, PageRank, scalable data stream filtering and querying, and scalable classification, in the context of different applications such as Social Network Analysis, Spam Detection, Association Rule Analysis, and Recommender Systems. Prereq: C- or higher in CSCI 3287, CSCI 3412 & MATH 3195. Restriction: Restricted to students in a computer science major or minor. Cross-listed with CSCI 5702 and CSCI 7702. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or higher in CSCI 3287, CSCI 3412 MATH 3195. Restriction: Restricted to students in a computer science major or minor.
Typically Offered: Fall.

CSCI 4738 - Senior Design I (3 Credits)
This is an advanced practical course in which students design, implement, and document and test software systems for use in industry, non-profits, government and research institutions. The course offers practical experience by working closely with project sponsors. It also offers extensive experience in oral and written communication throughout the software life cycle. Prereq: Grade of C- or higher in CSCI 3287, CSCI 3415, CSCI 3453, and CSCI 3508. Restriction: Restricted to Computer Science Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3287, CSCI 3415, CSCI 3453, and CSCI 3508. Restricted to Computer Science Majors (CSCI-BS).

CSCI 4739 - Senior Design II (3 Credits)
This course is a continuation of Senior Design I. Students must have taken Senior Design I in order to enroll for Senior Design II. In this course, the projects begun in Senior Design I are completed and presented. Prereq: CSCI 4738. Restricted to undergraduate Computer Science Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4738. Restricted to Computer Science Majors (CSCI-BS).

CSCI 4741 - Principles of Cybersecurity (3 Credits)
Focuses on the most common threats to cybersecurity as well as ways to prevent security breaches or information loss. Topics will include: understanding and thwarting hacker methods, authentication, cryptography, programming security, malware analysis, web, database and file server security, network and enterprise security methods. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4742 - Cybersecurity Programming and Analysis (3 Credits)
Focuses on cybersecurity related programming and analysis skills. Topics include: network and security application development, intrusion detection, automating security hardening. Students will design and develop security applications in multiple programming languages. Undergraduate algorithms and programming knowledge expected. Pre-Req: CSCI 3415. Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5742. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3415. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4743 - Cyber and Infrastructure Defense (3 Credits)
Presents analytical study of state-of-the-art attack and defense paradigms in cyber systems and infrastructures. Analysis will focus on: theoretical foundations of cybersecurity, practical development of novel technical defense techniques and analysis of alternatives. Knowledge of undergraduate-level networking. Cross-listed with CSCI 5743. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4771 - Introduction to Mobile Computing (3 Credits)
Provides an in-depth understanding of the fundamentals in mobile computing and studies the existing and proposed solutions for ubiquitous computing. This course focuses on systems and networking issues involved with supporting mobility. Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5771. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4772 - Mobile and IoT Security (3 Credits)
This course concentrates on the computing of emerging mobile and IoT systems security in the Computer Science domain. The seminar will discuss recent research on computing for mobile user authentication, vulnerability risk detection of mobile/IoT systems, and software based defense mechanism. Prereq: Grade of C- or higher in CSCI 3453 and 3761. Restriction: Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5772. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4773 - Introduction to Emerging System Security (3 Credits)
This course concentrates on the security of the emerging system in the Computer Science domain. It focuses on radically novel systems, relatively fast-growing and potentially exerting a considerable impact on society, such as mobile systems, AI systems, and quantum systems. The security topics cover adversarial attacks, side/covert-channel attacks, covert-channel attacks, user authentication, biometrics, vulnerability risk detection, and defense countermeasure. Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors. Cross-listed with CSCI 5773. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors.

CSCI 4788 - Bioinformatics (3 Credits)
Provides a broad exposure to the basic concepts and methodologies of bioinformatics and their application to analyzing genomic and proteomic data. Topics may include dynamic programming algorithms, graph theoretic techniques, hidden Markov models, phylogenetic trees, RNA/protein structure prediction and microarray analysis. Cross-listed with MATH 4788, PHYS 4788. Prereq: Grade of C- or higher in CSCI 1410, CSCI 1411 and MATH 3195 or 3191. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 1410, CSCI 1411 and MATH 3195 or 3191. Restricted to Computer Science Majors and Minors.

CSCI 4800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to Computer Science Majors and Minors (CSCS-BA, CSCI-BS, CSCI-MIN, CMSC-MS)

CSCI 4810 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Credit will not count toward BSCS degree. Restriction: Restricted to BA Computer Science Majors (CSCS-BA). Repeatable. Max hours: 9 Credits. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to BA Computer Science Majors.
Typically Offered: Fall, Spring.

CSCI 4840 - Independent Study (3 Credits)
Restricted to undergraduate Computer Science Majors and Minors with senior standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to undergraduate Computer Science Majors and Minors with senior standing.

CSCI 4866 - Advanced Mobile and Ubiquitous Systems (3 Credits)
This course covers various aspects of mobile and ubiquitous systems to provide an in-depth understanding of principles, state-of-the-art solutions and challenges in design and implementation of such systems. Prereq: Grade of C- or higher in CSCI 3453 and 3761. Restriction: Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5866. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4910 - User Experience Design (3 Credits)
A how-to course for any technologist who has endured difficult interfaces and wants to design effective user interfaces that respect and advance the user experience. Course includes: Psychology, HCI personas, scenarios, prototyping, and evaluation for desktop and mobile applications. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restricted to Computer Science Majors and Minors.

CSCI 4920 - Computer Game Design and Programming (3 Credits)
Computer Game Design and Programming introduces practical and example driven approaches to modern 3D game development. Topics include 3D modeling, character animation, UI design, scripting, texture mapping, and sound effect. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4929 - Internship (3 Credits)
Faculty and employer-supervised employment in industry. Enrollment is limited to students who fully complete a contract for cooperative education credit by the last day of the drop or add period. Prereq: CSCI 3508 and cumulative GPA of 2.75 or higher. Restricted to undergraduate students in the Bachelors of Arts in Computer Science Program (CSCS-BA). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3508 and cumulative GPA of 2.75 or higher. Restricted to undergraduate students in the Bachelors of Arts in Computer Science Program (CSCS-BA).

CSCI 4930 - Machine Learning (3 Credits)
Provides theoretical and computational foundations in machine learning to design and develop intelligent applications to perform object recognition, personalized recommendations, improve cybersecurity, fact-checking, forecasting and finding communities based on three classes of algorithms: supervised, unsupervised, semi-supervised and reinforcement learning. Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) & CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5930. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4931 - Deep Learning (3 Credits)
Provides a foundation on deep learning; a sought-after skill in machine learning. Topics include neural network design & learning, restricted Boltzmann machine, convolution neural network, recurrent neural network, LSTMs, deep reinforcement learning, autoencoders, and evolving computation frameworks like TensorFlow, Keras. Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200) and CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5931. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4939 - Internship (3 Credits)
Faculty or employer-supervised employment in industry. Enrollment is limited to students who fully completed a contract for cooperative education credit by the last day of the drop or add period. Prereq: Grade of C- or higher in CSCI 3415 and cumulative GPA of 2.75 or higher. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Grade of C- or higher in CSCI 3415 and cumulative GPA of 2.75 or higher. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4951 - Big Data Systems (3 Credits)
Presents a practical while in-depth review of the principles of a series of modern data processing systems (e.g., Hadoop, Spark, TensorFlow) designed to address the Big Data challenges. In combination, these systems enable the data to knowledge (Big) data lifecycle. Prereq: Grade of C- or higher in MATH 3195 (or MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5951. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

Engineering (ENGR)

ENGR 1000 - Introduction to Engineering (1 Credit)
Introduces engineering profession, engineering design and practice; and the tools used by engineers to accomplish design. The specialties within engineering are described. Students are involved in application projects and use word processors, spreadsheets and engineering software. Note: ENGR 1000 cannot be substituted for ELEC 1201. Prereq: High school trigonometry. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

ENGR 1100 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with IWKS 2300 and MECH 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGR 1111 - Psychological and Social Implications of Technology (3 Credits)
This course will explore the impact of technology and its advances on human beings from an emotional, psychological, and social perspective. Discussions will include ethical, moral, and multicultural implications of technological advances from a global perspective and will require students to critically analyze issues that arise from such advances. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to majors with 12 credit hours or less at CU Denver.

ENGR 1130 - Chemistry for Engineers (5 Credits)
An introductory lecture and recitation course designed to meet the general chemistry requirement for engineering students. Topics include atoms, molecules, moles, stoichiometry, chemical bonding, atomic & molecular structures, thermodynamics and kinetics. The course will highlight the application of chemistry to engineering disciplines. Note: Suggested background of one year of high school chemistry or CHEM 1000 and MATH 1110 (or high school equivalent) strongly recommended. Max Hours: 5 Credits.
Grading Basis: Letter Grade

ENGR 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGR 1208 - Special Topics (3 Credits)
Restriction: Restricted to Engineering and pre-engineering students only.
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to Engineering and pre-engineering students only.

ENGR 1218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1238 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3400 - Technology and Culture (3 Credits)
Explores the cultural and political foundations of technology and the impact of technology upon the individual and society. Contributions to technological advances and the impact of technology on women and diverse ethnic groups are examined in the context of specific engineering designs and case studies. (Satisfies the multicultural diversity requirement of the UCDHSC core curriculum). Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

ENGR 3600 - International Dimensions of Technology and Culture (3 Credits)
This course provides students with an understanding of how science, technology and international issues interrelate in a world that has become more interconnected and interdependent. The course will focus on the technical, organizational and cultural aspects of information and other technologies with an emphasis on their impact on third world countries. (Satisfies the international perspectives requirement of the UCDHSC core curriculum). Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

ENGR 3995 - Global Technology, Business & Culture (3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Summer.

ENGR 4150 - Seminar: Special Topics in Engineering (1 Credit)
A flexible seminar format dealing with topics of special interest in engineering. Topics vary from semester to semester. Prereq: Senior standing. Cross-listed with ENGR 5150 and 7150. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to senior standing or higher
Typically Offered: Fall, Spring.

ENGR 4208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4800 - Science Engineering and Culture for Undergraduates (3 Credits)
Course for undergraduate international and limited English proficient (LEP) students to improve success in science and engineering degree programs through senior research paper writing , advanced STEM English skills and cross cultural training. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENGR 4840 - Independent Study (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Computer Science, BA

Introduction

Please click here (p. 323) to see computer science department information.

The bachelor of arts (BA) in computer science (CS) degree is designed to create transformational relationships among computer science and other fields of their interest across the university. It will allow undergraduate students with interests and passion in myriad fields to complement these with contemporary computer science knowledge, skills, and attitudes that will render them immediately impactful in today's rapidly changing workforce.

Graduates will be able to demonstrate a broad range of understanding in mathematics, computer software, algorithms, programming and a specialization of their choice across the CU Denver curriculum. Graduates will be able to:

- Apply algorithmic reasoning to a variety of computational problems
- Design, implement, and document solutions to needed computational problems
- Implement software systems that meet specific design requirements
- Use current tools or computing techniques to implement and evaluate programs or computer-based solutions.
- Apply computer science techniques and tools to solve problems in a chosen application area.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
2. Students must maintain a minimum 2.0 GPA in all CSCI courses attempted.
3. Undergraduate students in the CSE department are required to have a personal laptop before starting 3000-level classes that satisfies the requirements listed on the CSE Laptop Requirement Website (https://engineering.ucdenver.edu/laptops/#ac-computer-science-bachelor-of-arts-cs-2).

The BA in computer science requires 120 credits including: 24 credits of CU Denver core curriculum, 7 credits of mathematics, 8 credits of physical science, 43 credits of computer science, and 38 credits of free electives.

Take 43 credits of computer science courses including:

Code	Title	Hours
CU Denver Core Curriculum		
Select 24 credits		24
Computer Science Core		
CSCI 1410	Fundamentals of Computing	3
CSCI 1411	Fundamentals of Computing Laboratory	1
CSCI 2312	Object Oriented Programming	3
CSCI 2421	Data Structures and Program Design	3
CSCI 2511	Discrete Structures	3
CSCI 3287	Database System Concepts	3
CSCI 3412	Algorithms	3
CSCI 3508	Introduction to Software Engineering	3
Computer Science (CSCI)		
Select seven 3000-level courses (21 credits) not applied to the above 22 credits [1]		21
Mathematics		
MATH 1401	Calculus I	4
Select additional 2000+ level math course		3
Science		
Students will need to complete 8 credits (2 courses with associated labs) of natural and physical sciences with labs. A minimum of 4 credits will need to come from the CU Denver core natural and physical courses w/labs intended for science majors.		
Complete a minimum of 4 credits (one set):		4
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I	
PHYS 2010 & PHYS 2321	College Physics I and Intro Experimental Phys Lab I	
PHYS 2311 & PHYS 2351	General Physics I: Calculus-Based and Applied Physics Lab I	
PHYS 2311 & PHYS 2321	General Physics I: Calculus-Based and Intro Experimental Phys Lab I	
Additional courses with associated labs that can be counted toward the science requirement to achieve 8 credits:		4
ANTH 1303	Introduction to Biological Anthropology	
BIOL 1550	Basic Biology: Ecology and the Diversity of Life	
BIOL 1560	Basic Biology: From Cells to Organisms	
CHEM 1474	Core Chemistry: Chemistry for Everyday	
CHEM 1494	Forensic Chemistry	
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
GEOL 1073 & GEOL 1074	Physical Geology: Surface Processes and Physical Geology: Surface Processes Laboratory	
GEOL 1083 & GEOL 1084	Physical Geology: Internal Processes and Physical Geology: Internal Processes Laboratory	
PHYS 1052	General Astronomy I	

	CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II
	PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II
	BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)
	PHYS 2331 & PHYS 2341	General Physics II: Calculus-Based and Intro Experimental Phys Lab II
	PHYS 2331 & PHYS 2361	General Physics II: Calculus-Based and Applied Physics Lab II
Free Electives		
Select for students' area of concentration		38
Total Hours		**120**

[1] Students may apply up to 3 credits of approved CSCI internship to the CS Technical Electives requirement.

Please note CS courses that are not part of the BACS can be counted toward satisfying free electives. This can help with taking systems courses to prepare for the required background for some advanced CS/ breadth areas of interest.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Computer Science, BS

Introduction

Please click here (p. 323) to see computer science department information.

Undergraduate computer science students at CU Denver are able to tailor their degree to their interests and goals. Students are exposed to the breadth of the field including machine learning & data science, computer graphics & game design, programming, software engineering, systems, scientific computing, secure computing, theory and cyber-physical systems.

The computer science bachelor of science program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

The educational objectives of the computer science undergraduate program are to produce graduates who:

- Advance professionally as productive, practicing professionals in computer science and related careers through the continued development of their expertise and skills.
- Further develop their knowledge, skill set, and career opportunities through graduate education and/or professional studies.
- Function effectively as part of a team to succeed in their professional careers.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
2. Students must maintain a minimum 2.0 GPA in all CSCI courses attempted.
3. Undergraduate students in the CSE department are required to have a personal laptop before starting 3000-level classes that satisfies the requirements listed on the CSE Laptop Requirement Website (https://engineering.ucdenver.edu/laptops/#ac-computer-science-bachelor-of-science-master-of-science-3).

The BS computer science degree requires 128 credits including: 24 credits of CU Denver Core Curriculum, 12 credits of mathematics, 10 credits of physical science, 3 credits of engineering design, and 79 credits of computer science.

Code	Title	Hours
CU Denver Core Curriculum		
Select 24 credits		24
Engineering Design		
ENGR 1200	Fundamentals of Engineering Design Innovation	3
Computer Science		
CSCI 1410	Fundamentals of Computing	3
CSCI 1411	Fundamentals of Computing Laboratory	1
CSCI 2312	Object Oriented Programming	3
CSCI 2421	Data Structures and Program Design	3
CSCI 2511	Discrete Structures	3
CSCI 3287	Database System Concepts	3
CSCI 3412	Algorithms	3
CSCI 3508	Introduction to Software Engineering	3
CSCI 4034	Theoretical Foundations of Computer Science	3
Computer Science Core		
CSCI 1510	Logic Design	3
CSCI 2525	Assembly Language and Computer Organization	3
CSCI 3415	Principles of Programming Languages	3
CSCI 3453	Operating System Concepts	3
CSCI 3761	Introduction to Computer Networks	3
CSCI 4551	Parallel & Distributed Computing	3
CSCI 4591	Computer Architecture	3
Capstone Courses		
CSCI 4738	Senior Design I	3
CSCI 4739	Senior Design II	3
Data Science		
Select one of the following:		3
CSCI 4455	Data Mining	
CSCI 4580	Data Science	
CSCI 4930	Machine Learning	
CSCI 4931	Deep Learning	
CSCI 4951	Big Data Systems	
Scientific Computing		
Select one of the following:		3
CSCI 3560	Probability and Computing	
CSCI 4407	Security & Cryptography	
CSCI 4650	Numerical Analysis I	
CSCI 4110	Applied Number Theory	
Secure Computing		
Select one of the following:		3
CSCI 4741	Principles of Cybersecurity	
CSCI 4742	Cybersecurity Programming and Analysis	
CSCI 4743	Cyber and Infrastructure Defense	
System Software		
Select two of the following:		6
CSCI 3511	Hardware-Software Interface	
CSCI 4287	Embedded Systems Programming	
CSCI 4565	Introduction to Computer Graphics	
CS Technical Electives		
Select four courses of any 3000-level or above Computer Science (CSCI) course that is not applied to the above 67 credits. [3]		12

Mathematics		
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 3195	Linear Algebra and Differential Equations [1]	4
Science		
Select a two-course sequence with lab of the following:		10
Choice 1 [2]		
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	
Choice 2 [2]		
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I	
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	
Choice 3		
PHYS 2311 & PHYS 2321	General Physics I: Calculus-Based and Intro Experimental Phys Lab I	
PHYS 2331 & PHYS 2341	General Physics II: Calculus-Based and Intro Experimental Phys Lab II	
Total Hours		**128**

1 Students can substitute both MATH 3191 Applied Linear Algebra and MATH 3200 Elementary Differential Equations for MATH 3195 Linear Algebra and Differential Equations

2 Additional credits needed to reach 10 may come from an advanced science course beyond CHEM 2061 General Chemistry II or beyond BIOL 2020 Molecules to Cells (Gen Bio), an additional CS elective, MATH 2421 Calculus III, a 3000/4000 level MATH course, or ENGR 4150 Seminar: Special Topics in Engineering

3 Students may apply up to 3 credits of approved CSCI internship to the CS Technical Electives requirement.

Measurable Outcomes

The bachelor of science in computer science program must enable its students to attain, by the time of graduation:

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Computer Science Minor

Introduction

Please click here (p. 323) to see Computer Science department information.

The Department of Computer Science and Engineering offers a minor in computer science. The requirements for the minor are listed below.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 296) to go to information about declaring a major/minor.
- To declare the computer science minor, students must complete and send a Minor Declaration Form to the engineering dean's office. Once declared, students are required to meet with a computer science advisor to complete the computer science minor coursework form. The Computer Science Minor declaration must be completed to register for 3000-level courses.
- For more information or an advising appointment, contact the Department of Computer Science and Engineering at 303-315-1408 or visit the Lawrence Street Center (1380 Lawrence Street), suite 800.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Any undergraduate student currently enrolled in a CU Denver degree program with a major other than computer science or cybersecurity may earn a minor in computer science.
2. A Computer Science Minor plan of study must be completed and approved by a computer science advisor.
3. A student must fulfill all prerequisites for the courses they select. See the catalog course descriptions for prerequisite information for each course.
4. All courses taken for the minor must have a CSCI prefix and be taught by a computer science faculty member.
5. All courses taken for the minor must be completed with a C- or better with a 2.0 GPA average for all eight courses.

Code	Title	Hours
MATH 1401	Calculus I	4
CSCI 1410	Fundamentals of Computing	3
CSCI 1411	Fundamentals of Computing Laboratory	1
CSCI 2312	Object Oriented Programming	3
CSCI 2421	Data Structures and Program Design	3
Four additional CSCI courses [1]		12
Total Hours		**26**

[1] One of which may be at the 2000 level. All others must be at the 3000-level or higher.

Cybersecurity, BS

Introduction

Please click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-engineering-design-computing/computer-science-engineering/) to see the computer science department information.

The Bachelor of Science in Cybersecurity degree will allow undergraduate students to combine their passion for computer science with skills to defend computers, servers, mobile devices, electronic systems, networks, users and data from malicious attacks. Skills and experiences will render them immediately useful in today's workforce where cybersecurity—cyber offense and defense—is a growing concern and necessity in both the public and private sector.

Graduates will be able to apply the attained computing and security skills and knowledge to create solutions to real-world problems, and analyze, evaluate, and maintain operational systems in the presence of cyber risks and threats. Graduates will be able to:

- Analyze a complex computing and security problem and apply algorithmic reasoning to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing and security requirements.
- Communicate and function effectively in professional contexts and teams.
- Make informed judgments in computing and security practices based on legal and ethical principles.
- Apply security principles and practices to maintain operations in the presence of threats.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
2. Students must maintain a minimum 2.0 GPA in all CSCI and CSCY courses attempted.

Undergraduate students in the Department of Computer Science and Engineering are required to have a personal laptop, with the specifications on the CEDC Student Laptop website (https://engineering.ucdenver.edu/laptops/#ac-computer-science-bachelor-of-arts-cs-2).

The BS in cybersecurity requires 120 credits including:

- 24 credits CU Denver core curriculum
- 7 credits mathematics
- 8 credits natural and physical science
- 3 credits engineering design
- 31 credits computer science
- 47 credits cybersecurity

Code	Title	Hours
CU Denver Core Curriculum		**24**
Computer Science Core for Cybersecurity		
CSCI 1410	Fundamentals of Computing	3
CSCI 1411	Fundamentals of Computing Laboratory	1
CSCI 1510	Logic Design	3
CSCI 2312	Object Oriented Programming	3

CSCI 2421	Data Structures and Program Design	3
CSCI 2511	Discrete Structures	3
CSCI 2525	Assembly Language and Computer Organization	3
CSCI 3287	Database System Concepts	3
CSCI 3412	Algorithms	3
CSCI 3453	Operating System Concepts	3
CSCI 3761	Introduction to Computer Networks	3
Cybersecurity Core		
CSCY 2930	Practical System Administration	2
CSCY 3740	Computer Security	3
CSCY 3765	Secure Network and Systems Programming	3
CSCY 4407	Security and Cryptography	3
CSCY 4738	Senior Design I	3
CSCY 4739	Senior Design II	3
CSCY 4741	Principles of Cybersecurity	3
CSCY 4742	Cybersecurity Programming and Analysis	3
CSCY 4743	Cyber and Infrastructure Defense	3
CSCY 4772	Mobile and IoT Security	3
CSCY 4950	Cybersecurity Risk Analysis and Management	3
15 credits of any 3000-level or above Cybersecurity (CSCY) courses not applied to the above 32 credits. Students may apply up to two of the following courses in place of CSCY courses: MATH 3195, CSCI 3415, CSCI 4034, CSCI 4591 & CSCI 4773		15
Mathematics		
MATH 1401	Calculus I	4
MATH 2830	Introductory Statistics	3
Science		**8**
Students must complete a minimum of 8 credits (two courses with associated labs) of natural and physical sciences with labs for science majors. Students may choose to complete ENGR 1300 Chemistry for Engineers as one choice.		
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I	
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	
PHYS 2010 & PHYS 2321	College Physics I and Intro Experimental Phys Lab I	
PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II	
PHYS 2311 & PHYS 2321	General Physics I: Calculus-Based and Intro Experimental Phys Lab I	
or PHYS 2351	Applied Physics Lab I	
PHYS 2331 & PHYS 2341	General Physics II: Calculus-Based and Intro Experimental Phys Lab II	
or PHYS 2361	Applied Physics Lab II	
ENGR 1130	Chemistry for Engineers	
Engineering Design		
ENGR 1200	Fundamentals of Engineering Design Innovation	3
Total Hours		**120**

Measurable Outcomes

The bachelor of science in cybersecurity program must enable its students to attain, by the time of graduation:

- Analyze a complex computing and security problem and apply algorithmic reasoning to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing and security requirements.
- Communicate and function effectively in professional contexts and teams.
- Make informed judgments in computing and security practices based on legal and ethical principles.
- Apply security principles and practices to maintain operations in the presence of threats.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

Cybersecurity and Secure Computing Undergraduate Certificate

Introduction

The goal of the undergraduate certificate of Cybersecurity & Secure Computing program is to reduce vulnerability in the national information infrastructure by promoting higher education and research to help prepare cyber defense professionals for careers in both the public and the private sector. The curriculum of this certificate has been created to meet all criteria of NICE (National Initiative for Cybersecurity Education) undergraduate level of certification.

Certificate Objectives

This certificate program focuses on both the technical and analytical aspects of advanced cybersecurity and defense.

Program Objectives

- Master the fundamental concepts of cybersecurity principles and techniques.
- Learn about potentials for cybersecurity threats and attacks.
- Master cyber-defense tools, methods, and components to secure systems.
- Learn how to take appropriate measures should a system compromise occur.
- Learn principles and practices for secure computing

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

Current students in good standing completing a BS or BA in computer science or a minor in computer science are eligible. Students completing a degree in cybersecurity are ineligible to complete this certificate. Applications from other majors at CU Denver or non-degree students will be evaluated based on their current transcript. The student's application is subject to the approval of the computer science and engineering department chair.

Students who want to complete the Cybersecurity and Secure Computing Undergraduate Certificate must apply using a Cybersecurity and Secure Computing Certificate intent-to-complete form (https://ucdenverdata.formstack.com/forms/cssc/).

Students planning to pursue a Cybersecurity & Secure Computing Certificate in Computer Science and Engineering should apply as early as possible to facilitate course planning, and no later than census date of the semester prior to graduation with their undergraduate degree.

Process to Attain Certificate Objectives

The following classes need to be taken with a grade of C- or better.

Code	Title	Hours
CSCI 3761	Introduction to Computer Networks	3
CSCI 3453	Operating System Concepts	3
CSCI 4034	Theoretical Foundations of Computer Science	3
CSCI 4741	Principles of Cybersecurity	3
CSCI 4743	Cyber and Infrastructure Defense	3
Total Hours		**15**

Students must take and pass each course with a grade of C- or better. The Cybersecurity & Secure Computing Certificate requires a minimum cumulative GPA of 2.0.

Learning Outcomes

- Be able to describe and apply the fundamental concepts of cybersecurity principles and techniques.
- Be able to analyze potential cyber threats and attacks.
- Be able to use cyber defense tools, methods, and components to properly secure systems.
- Be able to effectively and quickly evaluate and mitigate if systems are threatened or compromised.

Electrical Engineering

Chair: Mark Golkowski
Program Manager: Annie Schweitzer Bennett
Administrative Assistant: Karla Flores
Office: North Classroom 2615
Telephone: 303-315-7520
Email: electrical@ucdenver.edu
Website: ucdenver.edu/electrical-engineering (https://ucdenver.edu/electrical-engineering/)

Overview

Electrical Engineering Programs

Modern electrical engineering is a very broad and diverse field. Never before has there been such a challenge and opportunity for electrical engineering to serve mankind. Today's electrical engineers are involved in the development of technology, materials and products to improve the quality of life. They are concerned with the generation and transmission of power, the control and utilization of natural and synthetic resources, the communication of data and information and the intelligent use of computers in consumer as well as industrial products and processes. Systems in electrical engineering range in size from microprocessors through megawatt energy conversion systems to global audio and video communication networks.

At CU Denver, the electrical engineering curriculum prepares students for careers in product design, manufacturing, research, development, operation and plant engineering, technical sales and application engineering. The goal is to educate and inspire students to achieve their maximum career potential.

Mission Statement

We provide graduate programs and an ABET-accredited undergraduate program that are accessible to a diverse group of students-students of different racial and cultural backgrounds, full-time students as well as those who have considerable work and family commitments outside their academic learning and students with a wide variety of work experiences.

Undergraduate Information

Entering students begin their program with a solid foundation in mathematics, physics, chemistry and computers. Social science, humanities and communication courses provide a diverse background. Intensive courses follow in the theory and laboratory application of digital logic and electrical circuits, electromagnetic fields, electronics, computer engineering, Internet of Things (IoT), signals and systems, controls, electrical machines and power systems and microprocessors. Throughout the entire course of study, students reinforce their understanding of theory through laboratory experience and extensive design projects. A strong background is provided in all of the major fields of electrical engineering: circuits and electronics, microcomputers, signal and image processing, communications, autonomous and robotic systems, power and energy conversion, and automatic control systems and instrumentation. Ethics is an integral part of the curriculum. During the senior year, advanced undergraduate-level courses in different specialty areas, design projects and professional electives allow the student to explore areas of special interest.

Students should supplement this information about the curriculum by consulting a copy of the *Department of Electrical Engineering Advisement Guide*, which may be obtained in the Department of Electrical Engineering office located in North Classroom 2615. The *Department of Electrical Engineering Advisement Guide* contains the latest information concerning the curriculum as well as guidelines and procedures with which each student should be familiar. To be awarded the bachelor of science in electrical engineering, a student must satisfactorily complete 128 semester hours, satisfy all university graduation requirements and maintain at least a 2.0 GPA in all electrical engineering courses attempted. Appointments to see any of the departmental advisors may be made by calling 303-315-7520.

Programs

- Electrical Engineering, BS (p. 354)
- Computer Engineering Minor (p. 356)
- Electrical Engineering Minor (p. 357)

Faculty

Professors:

Hamid Fardi, PhD, University of Colorado Boulder
Stephen Gedney, PhD, University of Illinois at Urbana-Champaign
Mark Golkowski, PhD, Stanford University
Fernando Mancilla-David, PhD, University of Wisconsin at Madison
Jaedo Park, PhD, The Pennsylvania State University
Miloje Radenkovic, PhD, University of Belgrade, Yugoslavia

Associate Professors:

Tim Chifong Lei, PhD, University of Michigan

Assistant Professors:

Vijay Harid, PhD, Stanford University
Alireza Vahid, PhD, Cornell University

Senior Instructor:

Lary Speakman, BS, University of Colorado Denver

Electric Engineering (ELEC)

ELEC 1201 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, ENGR 1200, MECH 1200 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ELEC 1510 - Digital Logic (3 Credits)
The design of combinatorial and sequential switching circuits. Topics include Boolean algebra, Boolean function minimization technique, combinatorial circuit analysis and synthesis, synchronous sequential circuit analysis and synthesis, algorithmic state machine design, asynchronous sequential circuit analysis and synthesis. Max hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 1520 - Programming for Electrical Engineers (3 Credits)
An introductory course in programming using C/C++ and Python. The objective of the course is to examine the design of programs using language concepts, data structures, algorithms, and object-oriented design techniques to solve fundamental engineering problems. Students develop skills to program, construct data structures, and test & debug solutions, while gaining knowledge of the fundamental elements and operation of computer systems. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 2132 - Circuit Analysis I (3 Credits)
Introduces circuit analysis: basic principles, operational amplifier circuits, first-order and second-order circuits, steady-state sinusoidal analysis with phasor mathematics. Prerequisite: Math 2411 with a C- or higher and Phys 2311 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 and MATH 2411 with a C- or higher

ELEC 2142 - Circuit Analysis II (3 Credits)
Sequential course after ELEC 2132. Topics include: Solution of circuits using Laplace transforms, frequency domain analysis, additional steady-state solutions, Bode plots, active filters, pulses, impluses, and computer-aided analysis. Prerequisite: Math 2421 with a C- or higher and Phys 2331 with a C- or higher, Elec 2132 with a C- or higher. This course can be taken stand alone without a lab. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2132, MATH 2421 and PHYS 2331 with a C- or higher.

ELEC 2520 - Embedded Systems (3 Credits)
A second semester computer engineering course covering microcontroller & microprocessor-based embedded system design and interfaces including peripherals, development tools, constraints and interfacing between physical world and device. Prereq: ELEC 1520 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 1520 with a C- or higher.

ELEC 2531 - Logic Laboratory (1 Credit)
Experiments in digital logic utilizing both computer simulation and actual analysis using integrated circuits. Initially, combinational logic circuits are studied, including circuits such as binary adders and multipliers, followed by sequential circuits, including counters. Meters and oscilloscopes are introduced. Use of computer-aided design tools facilitating design, simulation, and implementation of digital systems using field-programmable logic devices are an integral part of the entire course. Coreq: ELEC 1510. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 1510.

ELEC 2651 - Signal Processing (3 Credits)
Introduction to discrete-time signal processing and frequency domain analysis. Sampling and interpolation, discrete Fourier transform, effects of filtering and modulation of signals. Concepts are explored in the context of multimedia, communications, and data analysis applications. Emphasizes computer-based signal processing using MATLAB. Prereq: ELEC 1520 with a C- or better. Coreq: MATH 3195 or MATH 3191. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 1520 with a C- or better. Coreq: MATH 3195 or MATH 3191.

ELEC 3030 - Electric Circuits and Systems (3 Credits)
This basic electrical engineering course is for non-majors (does not apply to BSEE degree). Students study circuit analysis, transformers, electric motors, and simple electronic circuits (diodes and transistors). Prereq: MATH 2421 and PHYS 2331 with a C- or higher. Restriction: Restricted to majors within the College of Engineering, Design and Computing. Cross-listed with MECH 3030. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 and PHYS 2331 with a C- or higher Restriction: Restricted to majors within the College of Engineering, Design and Computing

ELEC 3133 - Electromagnetic Fields (3 Credits)
Fundamental physics and applications of electric and magnetic fields are covered. Topics include: vector analysis in multiple coordinate systems, Maxwell's equations in free space and material regions including boundary conditions, static and quasi-static electric and magnetic fields, uniform plane waves for free space and for materials. Prerequisite: MATH 2421 with a C- or higher and PHYS 2331 with a C- or higher, ELEC 2132 with a C- or higher, MATH 3195 with a C-or higher. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2132, MATH 2421, MATH 3195 (or MATH 3191 and MATH 3200), and PHYS 2331 all with a grade of C- or higher. Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 3164 - Energy Systems (3 Credits)
Explores various energy resources and modern conversion systems utilized to generate, store, process, and deliver electric power. Topics include electromechanical, electrochemical, and renewable energy systems, as well as switch-mode power processing and power networks. Prereq: ELEC 2142 with a C- or higher, and ENGR 1130 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or higher, and ENGR 1130 with a C- or higher.

ELEC 3225 - Electronics (4 Credits)
BJT and FET transistor models at high frequencies, multistage amplifiers, frequency response of amplifiers. Feedback, operational amplifiers, oscillators, power amplifiers, and introduction to power electronics. Prereq: ELEC 2142, PHYS 2331 and ENGR 1130. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or better, PHYS 2331 with a C- or better and ENGR 1130 with a C- or better. Restriction: Restricted to students within the College of Engineering, Design and Computing.

ELEC 3316 - Signals and Systems (3 Credits)
Introduces the fundamentals of signals and systems analysis. Topics include: time domain analysis of continuous and discrete time systems, frequency domain (Laplace and z-transform) analysis, applications to filters and feedback systems, Fourier transform for both continuous and discrete time signals, sampling and signal reconstruction, applications to communication systems and state space representation. Learning experience is enhanced by using MATLAB-based examples and experiments. Prereq: ELEC 2142 with a C- or higher, ELEC 2651 with a C- or higher, MATH 3195 with a C- or higher or MATH 3191 and MATH 3200 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or higher, ELEC 2531 with a C- or higher, ELEC 2651 with a C- or higher, MATH 3195 with a C- or higher or MATH 3191 and MATH 3200 with a C- or higher.

ELEC 3520 - Intelligent Systems: IoT & Cyber-Physical Systems (3 Credits)
A computer engineering course covering intelligent systems that include applications with connected Internet-of-Things (IoT) devices and cyber-physical elements. An intelligent system consists of a collection of computing devices communicating with one another and capable of interacting with the physical world. The course explores the system design and software development process to deploy real-time embedded applications in real-world scenarios. Topics include multiple hardware and software systems necessary to perform sensing, actuation, processing, and communication with connected computing devices. Prereq: ELEC 2520 with a C- or better, ELEC 2531 with A C- or better and ELEC 2651 with a C- or better. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: ELEC 2520 with a C- or better, ELEC 2531 with A C- or better and ELEC 2651 with a C- or better.

ELEC 3701 - Machine Learning for Engineers (3 Credits)
The course introduces the mathematical formalism and software for machine learning approaches in electrical engineering problems. Selected applications include signal detection, signal classification, remote sensing, imaging, and model optimization. Topics include: linear and logistic regression, support vector machines, clustering, artificial neural networks, hypothesis testing, and Bayesian analysis. Prereq: ELEC 3817 with a C- or better and MATH 3195 with a C- or better or MATH 3191 and MATH 3200 and ELEC 2520 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3817 with a C- or better AND (MATH 3195 or (MATH 3191 and MATH 3200 with a C- or better and ELEC 2520))

ELEC 3724 - Energy Systems Laboratory (1 Credit)
Provides hands-on experience on electromechanical, electrochemical, and semiconductor-based energy conversion systems. Sessions include operation of induction motor and generator, energy storage, and renewable energy experiments. Prereq: ELEC 2142 with a C- or better. Prereq or Coreq: ELEC 3164. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or better. Prereq or Coreq: ELEC 3164.

ELEC 3817 - Engineering Probability and Statistics (3 Credits)
Topics include: definition of probability, conditional probability, independence, combined experiments and Bernoulli trials, random variables, joint distribution and density functions, correlations, sample mean and variance. Also, introduction to random processes, auto and cross correlation functions, spectral density of random signals, responses of a linear system to random inputs. Prereq: MATH 3195 with a C- or better and Math 2421 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 with a C- or better and Math 2421 with a C- or better.

ELEC 3900 - Circuit Design and Fabrication Laboratory (3 Credits)
Hands on laboratory course that involves electrical measurement and diagnosis in the context of electrical circuit design, fabrication, and validation. Standard benchtop tools of oscilloscope, signal generator, digital multi-meter, DC power supply are introduced. Final project involves layout and fabrication of a printed circuit board (PCB). Prereq: ELEC 3225 with a C- or better and ELEC 2142 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 with a C- or better and ELEC 2142 with a C- or better.

ELEC 3939 - Internship (1-3 Credits)
Students gain engineering design experience involving application of specific technical concepts and skills in a supervised industrial environment. (Must have approval from ELEC faculty.) Prereq: ELEC 2142. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 2142

ELEC 4005 - IC Design (3 Credits)
Explores digital integrated circuit design including MOS processing steps, physical operation, building blocks of digital circuits, advanced nMOS, pMOS and CMOS circuit design, silicon VLSI technology and circuit and chip level. Spice and lay-out Editor are used. The physical relationship between circuit design and actual silicon layout and structure and technology are emphasized. Prereq: ELEC 3225. Cross-listed with ELEC 5005. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225.

ELEC 4025 - Device Electronics (3 Credits)
A course relating performance and limitations of solid state devices to their structures and technology. For both advanced circuit and device engineers. Semiconductor physics and technology, pn-junction and MOS devices used in modern integrated circuits. Prereq: ELEC 3225 and senior standing. Cross-listed with ELEC 5025. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 Restriction: Senior standing

ELEC 4133 - Advanced Electromagnetic Fields (3 Credits)
A course focused on electromagnetic waves. Topics include: electromagnetic power, reflection and transmission of uniform plane waves in layered media, rectangular wave guides, two-conductor transmission lines, Smith Chart representation of wave impedance and reflection. Prereq: ELEC 3133. Cross-listed with ELEC 5033. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4134 - Introduction to Microwave Circuit Design (3 Credits)
This course provides the basic principles of microwave circuit design, including transmission line theory, network parameters, signal flow graphs, design of high frequency matching networks, filters, hybrids and couplers using waveguide elements, high frequency amplifier and mixer design. Prereq: ELEC 3133. Cross-listed with ELEC 5134. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4136 - Control Systems Analysis (3 Credits)
Introduces students to the fundamentals of analysis and design of feedback systems. Topics include: mathematical models of linear continuous-time systems applied to modeling physical systems in the time and frequency domain, control system characteristics, Routh's stability and transient response analysis, Nyquist stability and polar plots, analysis and design of linear control systems by root locus and frequency response, methods, compensator implementation, finite-precision numerical effects, round-off errors, and computer-based design applications. Prereq: ELEC 3316. Coreq: ELEC 3817. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 Coreq: ELEC 3817 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4154 - Electric and Hybrid Vehicle Powertrains (3 Credits)
Covers the fundamental components and operation of electric and hybrid vehicles' drivetrain. Topics include electric vehicle history, major vehicle components, fundamental vehicle dynamics, electric and hybrid drivetrain configurations, electric motors and drives, energy storage, and power electronics chargers. Cross-listed with ELEC 5154. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ELEC 4164 - Electric Machines and Drives (3 Credits)
Covers power electronics drives for rotating electric machinery. Topics include power electronics elements for drives, load characteristics, dynamic modeling of AC machines, fundamental control algorithms, simulation and practical commercial drives. Prereq: ELEC 3164. Cross-listed with ELEC 5164. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4170 - Electric Machines and Drives Laboratory (1 Credit)
Offers hands-on experience on rotating electric machine drive simulations and commercial systems. Sessions include pulse-width modulation (PWM) inverter, induction, DC, and synchronous machine drives. Matlab/Simulink and a commercial inverter will be utilized. Prereq or Coreq: ELEC 4164/5164 or equivalent. Cross-listed with ELEC 5170. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: ELEC 4164 or ELEC 5164
Typically Offered: Fall.

ELEC 4174 - Power Electronic Systems (3 Credits)
Topics to be covered include: power electronics fundamentals and applications in power systems; uncontrolled, semi-controlled and fully controlled power semiconductors; converters design and control. Prereq: ELEC 3164. Cross-listed with ELEC 5174. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4184 - Power Systems Analysis (3 Credits)
Topics to be covered include: complex power; per-unit quantities; modeling of generators, transformers and transmission lines; power flow problem; economic dispatch; faults and sequence networks; and an introduction to power system protection and dynamics. Prereq: ELEC 3164. Cross-listed with ELEC 5184. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4225 - Advanced Electronics (3 Credits)
Switching state models of discrete components and integrated circuits, including logic gates, comparators, and operational amplifiers. Input, output, and transfer characteristics. Non-ideal properties. Analog-digital and digital-analog conversion. MOS-integrated circuits. Prereq: ELEC 3225 and Coreq: ELEC 3900. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 and Coreq: ELEC 3900. Restriction: Restricted to students within the College of Engineering, Design and Computing.

ELEC 4247 - Communication Theory (3 Credits)
Introduces the principles of analog and digital communication systems. Series expansion and Fourier Series and transforms. The sampling theorem. Stochastic principles and noise. Linear systems and Fourier analysis. Design of transmitters and receivers: modulation and demodulation schemes. Some information theoretic concepts: source coding, channel coding, channel capacity and performance measures. Prereq: ELEC 3316 and 3817. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: ELEC 3316 and 3817

ELEC 4248 - Digital Communication Systems (3 Credits)
Introduces digital communication systems covering elements of information theory; mathematical representation of signals and systems; modulation and demodulation for the additive Gaussian noise channel; performance analysis of various transmission formats; synchronization; coded waveforms; decoding algorithms; and other related topics. Prereq: ELEC 3316, 3817; recommended ELEC 4247. Cross-listed with ELEC 5248. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: ELEC 3316 and 3817

ELEC 4249 - Wireless networking (3 Credits)
Fundamentals of wireless communication from a physical-layer perspective. Multipath signal propagation and fading channel models. Design of constellations to exploit time, frequency, and spatial diversity. Reliable communication and single-user capacity. Interference management, multiple-access protocols, and multi-user capacity. Cellular uplink and downlink. Multiple-antenna systems and architectures. Communications with Intelligent Reflecting Surfaces. mmWave and THz communications. Connections to modern standards. Prereq: Elec 3817 and Elec 3316. Cross-listed with ELEC 5249. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817

ELEC 4250 - Information Inference and Learning Algorithms (3 Credits)
We indulge in a journey from the theory of information to the world of applications. We talk about what information means and provide the means to measure it. We then investigate various methods for extracting what matters from the available data. We bring in topics such as Bayesian data modeling, clustering algorithms, and neural networks to name a few. Prereq: ELEC 3316 and ELEC 3817 with a C- or higher. Cross-listed with ELEC 5250. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817 with a C- or higher.
Typically Offered: Fall.

ELEC 4276 - Digital Control Systems (3 Credits)
Topics to be covered include: discrete-time systems and the z-transform, characteristics of open-loop and closed-loop discrete-time systems, time-response characteristics and stability analysis, design of digital and hybrid control systems using z-transform, root locus, frequency domain, and state variable compensation techniques, compensator on, implementation, and computer-based design applications. Prereq: ELEC 3316 and ELEC 3817. Cross-listed with ELEC 5276. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4309 - Senior Design Project I (3 Credits)
Design methodology and tools, project planning and team building, ethics in engineering and research, career planning and portfolio building. Project designs are completed and presented to the class. Prereq: ELEC 2531. Coreq: ELEC 3133, 3164, 3225, 3316, 3520, 3701, 3724, 3817 and 3900. Restriction: Restricted to undergraduate majors within the College of Engineering, Design and Computing. ELEC 4309 and ELEC 4319 must be completed in subsequent academic semesters. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2531 Coreq: ELEC 3133, 3164, 3225, 3316, 3520, 3701, 3724, 3817 and 3900. Restricted to undergraduate majors within the College of Engineering, Design and Computing. ELEC 4309 and ELEC 4319 must be completed in subsequent academic semesters.

ELEC 4319 - Senior Design Project II (3 Credits)
Project designs completed in ELEC 4309 are constructed and tested. Oral and written presentations of the completed project performance are required. Prereq: ELEC 4309 in subsequent academic semester. Students must complete their Graduation Agreement prior to enrollment. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 4309 Restriction: Restricted to majors within the College of Engineering, Design and Computing

ELEC 4333 - Introduction to Computational Electromagnetics (3 Credits)
An intro to computational electromagnetics based on the Finite Difference Time-Domain (FDTD) covering, finite difference methods, the Yee algorithm, numerical error, stability, boundary conditions, source excitations, hands-on programming experience and application of FDTD to real problems. Prereq: ELEC 3133. Cross-listed with ELEC 5333. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4373 - Optical Engineering (3 Credits)
This course introduces some of the most important concepts in optical engineering and prepares students a solid foundation to apply them to applications in the industry and academic research. Prereq: ELEC 3133 Electromagnetic Fields. Cross-listed with ELEC 5373. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4375 - Engineering Neuroscience (3 Credits)
In this course, mathematical models and data processing strategies will be introduced as well as other cutting-edge research techniques to help students understand how these techniques can be applied to solve modern neuroscience problems. Prereq: ELEC 3316 or graduate standing. Cross-listed with ELEC 5735 and NRSC 7674 (Anschutz Medical Campus course). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 or Graduate Standing

ELEC 4406 - Control Systems Laboratory (1 Credit)
This lab includes system identification, design of velocity control systems, design of PID controllers and control systems using state variable feedback. Prereq or Coreq: ELEC 4136 or 4276. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: ELEC 4136 or 4276.

ELEC 4423 - Radio Frequency Laboratory (1 Credit)
Projects involve modern RF analyzers, wave-guide devices, time-domain techniques, characterization of filters/amplifiers, signal propagation and scattering, harmonic mixing, and radio frequency identification. Students will gain experience using MATLAB for data acquisition and processing. Prereq: ELEC 3133 and ELEC 3225. Cross-listed with ELEC 5423. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3133 and ELEC 3225.

ELEC 4435 - Advanced Electronics Laboratory (1 Credit)
Projects related to digital logic, analog and digital switches, A/D and D/A converters, and design of signal filters. Prereq: ELEC 3225. Coreq: ELEC 3900 and ELEC 4225. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3225. Coreq: ELEC 3900 and ELEC 4225.

ELEC 4444 - Power Systems Laboratory (1 Credit)
This lab introduces the student to modern computational tools used in power system analysis. Algorithms to solve the "power flow problem," the "economic dispatch problem," and the "optimal power flow problem" are discussed and implemented in the Matlab-Simulink mathematical analysis software package. Coreq: ELEC 4184. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4184.

ELEC 4466 - Adaptive Control System Design (3 Credits)
Basic concepts in adaptive feedback control. Overview of application areas. Stability of non-linear systems and hyperstability approach to the design of adaptive controllers. Passivity concept and Liapunoy stability. Design of model reference adaptive systems, self-tuning regulators, stochastic adaptive, and dual control systems. Computer-based design applications. Emphasis is placed on design projects. Prereq: ELEC 4136 or 4276. Cross-listed with ELEC 5466. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 4136 or 4276 Coreq: ELEC 4247 or 4248

ELEC 4467 - Communications Laboratory (1 Credit)
Analysis and design in three main areas: traditional analog communications at low and medium frequencies, digital communications, and microwave communications systems. Extensive use of spectrum analysis from low frequencies up to microwave range. Projects include noise, AM, FN, PM, PLL, sampling, quantizing, encoding, TDM, FSK, QPSK, 16QAM, receivers, and satellite communications systems. Prereq: ELEC 3735; Prereq or Coreq: ELEC 4247 or ELEC 4248. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3735 and 4247 or 4248

ELEC 4474 - Power Electronics Laboratory (1 Credit)
The power electronics laboratory introduces students to seven fundamental switchmode power conversion topologies, along with voltage and current feedback control, assembled on a reconfigurable power pole circuit board with external power supplies and laboratory. Coreq: ELEC 4174. Cross-listed with ELEC 5474. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4174 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4501 - Microprocessor Based Design (3 Credits)
Covers advanced treatment of embedded system design using microprocessors. Analog input circuitry is interfaced to a microprocessor, and a PC board layout is created to develop a complete system design. Software/Operating System is implemented for realtime I/O. Prereq/Coreq: ELEC 3520. Cross-listed with ELEC 5501. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq/Coreq: ELEC 3520.

ELEC 4511 - Hardware-Software Interface (3 Credits)
Computer engineering methods in hardware and software design applied to problems drawn from the mini- and micro-computer systems field. Hardware and software techniques for the design of combined hardware or software are developed. Interface and real-time programming techniques are considered. Graduate level requires additional projects and homework. Prereq: ELEC 3520. Cross-listed with ELEC 5511. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4521 - Microprocessor Laboratory (1 Credit)
Provides support for the projects assigned in ELEC 4501 - a complete embedded system is designed, built and tested. Coreq: ELEC 4501. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4501

ELEC 4531 - Introduction to Deep learning and PyTorch (3 Credits)
This course provides a foundation on neural networks of deep learning. Students will gain both theoretical and practical understanding of different deep neural networks and will work on a few real-world problems. Prereq: ELEC 3520. Cross-listed with ELEC 5531. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.
Typically Offered: Spring, Summer.

ELEC 4541 - Advanced Deep Learning for Computer Vision (3 Credits)
This course introduces the state-of-the-art deep learning research work. Students will gain both theoretical and practical understanding of deep learning in computer vision area. Prereq: ELEC 3520. Cross-listed with ELEC 5541. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.
Typically Offered: Spring, Summer.

ELEC 4555 - VLSI Circuit Simulation (3 Credits)
Computer methods for large integrated circuits. Theory and practice of VLSI circuit simulation. Nodal formulations of networks. Computer generation of sensitivities. Modeling active devices. DC solution of nonlinear networks. Prereq: ELEC 3225. Cross-listed with ELEC 5555. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225.

ELEC 4561 - Hardware-Software Lab (1 Credit)
Projects related to the software interface of a processor to external devices. Topics include A/D converters, serial and parallel interfaces. Prereq: ELEC 3520 and Coreq: ELEC 4511. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3520 and Coreq: ELEC 4511.

ELEC 4637 - Digital Signal Processing (3 Credits)
Discrete-time signals and systems in the time and frequency domain. Digital filter structures, design of FIR filters by windowing, optimum approximations of FIR filters. Design of digital IIR filters from continuous time domain. Computer-aided design of digital filters. The discrete Fourier transform and DSP algorithm implementation. Analysis of finite word length effects. Application of digital signal processing. Prereq: ELEC 3316 and 3817. Cross-listed with ELEC 5637. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817

ELEC 4644 - Introduction to Biomedical Imaging (3 Credits)
An important component of the recent expansion in biomedical engineering is the area of biomedical imaging. This ELEC 4644/5644 course is an introduction to biomedical imaging systems, not only covering the fundamentals of imaging physics but also the applications of four primary biomedical imaging modalities: X-Ray Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Nuclear Medicine (i.e. PET, SPECT), and Ultrasound Imaging. Prereq: ELEC 3316. Cross-listed with ELEC 5644. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4678 - Quantum Computing (3 Credits)
The course teaches students the principles, the algorithms and the programming methods of quantum computing, and also discusses the associated physics and mathematics background required. Other related topics such as quantum communication and quantum entanglement will also be discussed. Prereq: PHYS 2331 and ELEC 3817 with a C- or better. Cross-listed with ELEC 5678, PHYS 4678, and PHYS 5678. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331 with a C- or better, and ELEC 3817 with a C- or better.

ELEC 4679 - Quantum Computing Algorithms (3 Credits)
The course discusses several seminal quantum algorithms, including the quantum Fourier transforms, Grover's and Shor's algorithms, followed by explaining several advanced quantum computing algorithms, including quantum error correction, sparse linear systems, and variational eigensolver. Google Cirq quantum programming library will be used for actual quantum programming implementations of the algorithms discussed. Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900. Cross-listed with ELEC 5679, PHYS 4679, and PHYS 5679. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900.
Typically Offered: Fall.

ELEC 4680 - Quantum Computing Technology (3 Credits)
Students will explore some of the concepts and experimental practices for realizing quantum computers. They will engage in laboratory practice of relevant skills including high-performance analog electronics; optics based quantum encryption and eraser implementations; RF electronics; and vacuum and cryogenic techniques. Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900. Cross-listed with ELEC 5680, PHYS 4680, and PHYS 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900.
Typically Offered: Fall.

ELEC 4681 - Quantum Technology Systems (3 Credits)
Students will explore a systems approach toward experimental practices for realizing quantum information science and engineering (QISE), with a focus on vacuum and cryogenic techniques and integration of electronics subsystems into a "dry" cryostat. They will engage in laboratory practice of relevant skills including creation and measurement of high vacuum, methods for reaching ultra-low temperatures, concerns in the design and construction of cryogenic apparatuses, and operation of a "dry" cryogenic system at 4 K, including measurements on superconducting quantum interference devices. Cross-listed with PHYS 4681, PHYS 5681 and ELEC 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 4688 - Introduction to Nondestructive Testing (3 Credits)
A basic, broad understanding of the principles of nondestructive testing and evaluation is provided. The main objective of this course is to attract students to NDT fields and eventually help address the increasing needs of NDT engineers and technicians. Interaction and collaboration with local NDT industries will also be emphasized. As an introductory course, a broad interdisciplinary knowledge of NDT will be covered in the following sub-areas: Visual, Penetrant, Magnetic Particle, Eddy Current, Microwave, Ultrasonic, and Radiography. Prereq: ELEC 3316. Cross-listed with ELEC 5688. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4723 - High Performance Computer Architecture (3 Credits)
High Performance Computer Architecture covers the design of advanced computing systems. In particular, the course includes the design of modern microprocessors, characteristics of the memory hierarchy, and issues involved in multithreading and multicore architectures. Prereq: ELEC 3520. Cross-listed with ELEC 5723. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4727 - Computer Vision & Image Processing Acceleration (3 Credits)
Real-time constraints on computer-vision and image processing applications have motivated numerous explorations of multicore architectures to provide more efficiency through hardware parallelism and acceleration. This course undertakes the study of image processing and computer vision algorithms in the context of parallel hardware. Prereq: ELEC 3520. Cross-listed with ELEC 5727. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4755 - Renewable Energy Systems (3 Credits)
This course focuses on the modeling, analysis and control of grid-connected wind and photovoltaic energy systems. Prereq: ELEC 3164. Cross-listed with ELEC 5755. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4800 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ELEC 4802 - Special Topics (3 Credits)
Prereq: ELEC 3701 with a C- or higher. Restriction: Restricted to undergraduate ELEC students. Cross-listed with ELEC 5802. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3701 with a C- or higher. Restriction: Restricted to undergraduate ELEC students.
Typically Offered: Fall.

ELEC 4840 - Independent Study: ELEC (1-3 Credits)
An opportunity for independent creative work. Prereq: Permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

Electrical Engineering, BS

Introduction

Please click here (p. 347) to see Electrical Engineering department information.

Program Objectives

The educational objectives of the electrical engineering undergraduate program are to produce graduates who, within a few years of graduation, will:

- Demonstrate professional advancement as productive practicing engineers who continuously develop their technical expertise, as demanded by the rapidly changing technologies.
- Attain enhanced and broadened knowledge via graduate education in either engineering or other fields such as science, mathematics, business, medicine, and law.

These objectives are consistent with the mission of the University of Colorado Denver, congruent with the goals of the College of Engineering, Design and Computing and reflective of the mission of the Department of Electrical Engineering.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. The particular curriculum to be satisfied by each student is the one published in the catalog current at the time of the student's 30-hour senior checkout.
2. A graduation agreement should be requested by each student before completing registration for the student's last semester.
3. All electrical engineering students must satisfactorily complete ELEC 4309 Senior Design Project I, which is a fall-only course and ELEC 4319 Senior Design Project II, which is a spring-only course and these courses must be in consecutive semesters.
4. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
5. Students must maintain a minimum 2.0 GPA in all ELEC courses attempted.

Code	Title	Hours
Electrical Engineering		
ENGR 1200	Fundamentals of Engineering Design Innovation	3
ELEC 1510	Digital Logic	3
ELEC 1520	Programming for Electrical Engineers	3
ELEC 2132	Circuit Analysis I	3
ELEC 2142	Circuit Analysis II	3
ELEC 2520	Embedded Systems	3
ELEC 2531	Logic Laboratory	1
ELEC 2651	Signal Processing	3
ELEC 3133	Electromagnetic Fields	3
ELEC 3164	Energy Systems	3
ELEC 3225	Electronics	4
ELEC 3316	Signals and Systems	3
ELEC 3520	Intelligent Systems: IoT & Cyber-Physical Systems (spring only beginning sp. 24)	3
ELEC 3701	Machine Learning for Engineers (spring only)	3
ELEC 3724	Energy Systems Laboratory	1
ELEC 3817	Engineering Probability and Statistics (fall only)	3
ELEC 3900	Circuit Design and Fabrication Laboratory (summer and fall)	3
ELEC 4309	Senior Design Project I (fall only) [1]	3
ELEC 4319	Senior Design Project II (spring only) [1]	3
ENGR 3400	Technology and Culture	3
Professional Elective		
Select one course [2]		3
Other Courses		
Select seventeen semester hours from the following lists. At least two laboratories with an associated lecture course must be completed.		17
ELEC 4840	Independent Study: ELEC	
Control Systems		
ELEC 4136	Control Systems Analysis	
ELEC 4276	Digital Control Systems	
ELEC 4406	Control Systems Laboratory	
ELEC 4466	Adaptive Control System Design	
Micro-Electronics and VLSI		
ELEC 4005	IC Design	
ELEC 4025	Device Electronics	
ELEC 4225	Advanced Electronics	
ELEC 4435	Advanced Electronics Laboratory	
ELEC 4555	VLSI Circuit Simulation	
ELEC 5005	IC Design	
ELEC 5025	Device Electronics	
ELEC 5455	Computer Methods for Device Electronics	
ELEC 5555	VLSI Circuit Simulation	
Communications		
ELEC 4247	Communication Theory	
ELEC 4248	Digital Communication Systems	
ELEC 4249	Wireless networking	
ELEC 4637	Digital Signal Processing	
ELEC 5220	Methods of Engineering Analysis	
ELEC 5248	Digital Communication Systems	
ELEC 5250	Information Inference and Learning Algorithms	
ELEC 5276	Digital Control Systems	
ELEC 5446	Introduction to Modern Control Theory	

ELEC 5466	Adaptive Control System Design	
ELEC 5476	Optimal Control Systems	
ELEC 5638	Digital Image Processing	
ELEC 5648	Blind Signal Processing	
Fields, Waves and Optics		
ELEC 4133	Advanced Electromagnetic Fields	
ELEC 4134	Introduction to Microwave Circuit Design	
ELEC 4333	Introduction to Computational Electromagnetics	
ELEC 4373	Optical Engineering	
ELEC 4375	Engineering Neuroscience	
ELEC 4423	Radio Frequency Laboratory	
ELEC 5033	Advanced Electromagnetic Fields	
ELEC 5133	Electromagnetic Radiation and Antenna	
ELEC 5333	Introduction to Computational Electromagnetics	
ELEC 5334	Advanced Computational Electromagnetics	
ELEC 5373	Optical Engineering	
ELEC 5375	Engineering Neuroscience	
ELEC 5423	Radio Frequency Laboratory	
ELEC 5433	Fundamentals and Applications of Plasmas	
Computer Engineering and Embedded System Design		
ELEC 4501	Microprocessor Based Design	
ELEC 4511	Hardware-Software Interface	
ELEC 4521	Microprocessor Laboratory	
ELEC 4561	Hardware-Software Lab	
ELEC 4678	Quantum Computing	
ELEC 4723	High Performance Computer Architecture	
ELEC 4727	Computer Vision & Image Processing Acceleration	
ELEC 4800	Special Topics	
ELEC 5501	Microprocessor-Based Design	
ELEC 5511	Hardware-Software Interface	
ELEC 5678	Quantum Computing	
ELEC 5723	High Performance Computer Architecture	
Energy and Power Systems		
ELEC 4164	Electric Machines and Drives	
ELEC 4170	Electric Machines and Drives Laboratory	
ELEC 4174	Power Electronic Systems	
ELEC 4184	Power Systems Analysis	
ELEC 4444	Power Systems Laboratory	
ELEC 4474	Power Electronics Laboratory	
ELEC 5164	Electric Machines and Drives	
ELEC 5174	Power Electronic Systems	
ELEC 5710	Advanced Electric Drive Systems	
ELEC 5184	Power Systems Analysis	
ELEC 5444	Power System Laboratory	
ELEC 5755	Renewable Energy Systems	
Mathematics		
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 2421	Calculus III	4
MATH 3191 & MATH 3200 or MATH 3195	Applied Linear Algebra and Elementary Differential Equations Linear Algebra and Differential Equations	4-6
Science		
ENGR 1130	Chemistry for Engineers	5
PHYS 2311	General Physics I: Calculus-Based	4
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2331	General Physics II: Calculus-Based	4
Total Hours		**107-109**

1 Effective Spring 2020: Senior Design I will be offered only during fall semesters; Senior Design II will be offered only during spring semesters.

2 Professional electives may be selected from an approved list of upper-division or graduate-level courses or cooperative education. The electrical engineering advisor must be consulted prior to the selection of these electives.

To review the Degree Map for this program, please visit our website (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-engineering-design-computing/electrical-engineering/electrical-engineering-bs/cedc_bs_electrical_engineering.pdf).

Computer Engineering Minor

Introduction

Please click here (p. 347) to see electrical engineering department information.

The minor in computer engineering provides an opportunity to gain a more in-depth knowledge of computing technology, programming digital hardware, interfacing digital hardware, internet of things, microcontrollers and microprocessors, sensor technology, as well as computer vision and image processing. The calculus sequence required for most engineering programs is not a prerequisite for the computer engineering minor.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 296) to go to information about declaring a major/minor.
- Contact the Department of Electrical Engineering for a Computer Engineering Minor Coursework form.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must meet all prerequisites for all ELEC courses taken.
2. The minimum GPA is 2.0 with no individual course grade below C-
3. The student's application is subject to department approval.
4. Students may apply minor courses toward their major when applicable.

Code	Title	Hours
Required Courses		
ELEC 1510	Digital Logic	3
or CSCI 1510	Logic Design	
ELEC 1520	Programming for Electrical Engineers	3
ELEC 2520	Embedded Systems	3
ELEC 2531	Logic Laboratory	1
Technical Electives		
Select at least one of the following:		3
ELEC 3520	Intelligent Systems: IoT & Cyber-Physical Systems	
ELEC 4511	Hardware-Software Interface	
ELEC 4678	Quantum Computing	
ELEC 4727	Computer Vision & Image Processing Acceleration	
ELEC 4800	Special Topics [1]	
Total Hours		**13**

[1] If related to computer engineering and with approval by the electrical engineering department chair

Electrical Engineering Minor

Introduction

Please click here (p. 347) to see electrical engineering department information.

Electrical engineers use mathematics and physics tools and theory to develop systems ranging from smart electric grids, embedded systems and computer engineering products, integrated electronics, wired and wireless communications, networking sensing and imaging devices, and information technology. Students enrolled in the minor of electrical engineering will be given the opportunity to learn the fundamentals of electrical engineering as well as be introduced to some advanced applications. Students will be exposed to many real world applications and have hands-on engineering design experiences.

Students are encouraged to start this minor in their sophomore year of study.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 296) to go to information about declaring a major/minor.
- Contact the Department of Electrical Engineering for an Electrical Engineering Minor Coursework form.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must meet all prerequisites for any ELEC courses taken.
2. To receive the minor, the minimum GPA is 2.0 with no individual course grade below C-
3. The student's application is subject to department approval.
4. Students may apply minor courses toward their major when applicable.

Code	Title	Hours
Required Courses		
ELEC 2132	Circuit Analysis I	3
or ELEC 3030	Electric Circuits and Systems	
ELEC 2142	Circuit Analysis II	3
ELEC 3316	Signals and Systems	3
Junior Electives		
Select one of the following:		3
ELEC 3225	Electronics	
ELEC 3164	Energy Systems	
ELEC 3133	Electromagnetic Fields	
Technical Electives		**6**
Any 2 x 3 hour 4000-level ELEC lecture course or [1]		
Any 2 x 3 hour ELEC 5xxx will count for the minor.		
Total Hours		**18**

[1] Excluding ELEC 4309 Senior Design Project I/ELEC 4319 Senior Design Project II

Inworks

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Website: https://engineering.ucdenver.edu/inworks

Overview

Inworks is an innovation initiative of the University of Colorado Denver | Anschutz Medical Campus, based in the College of Engineering, Design and Computing. As a home for creators, thinkers, designers, and makers, we're a collaborative community of learners and leaders committed to solving humanity's most pressing problems. In our two state-of-the-art prototyping labs, we draw on expertise from many disciplines to synthesize unique solutions to real-world challenges. At Inworks, we learn and teach through making, but we don't just make things – we make them matter.

Our mission is to impart skills and habits of minds that allow people to collaboratively create impactful solutions to human problems.

When you take an Inworks course, the process of innovation is demystified. You'll learn the human-centered design process; it will guide you as you move from problem to prototype. In our prototyping labs you can access technologies to 3D print or solder a circuit. But don't expect to do it alone, because Inworks is a space that catalyzes meaningful collaboration. Students of all majors will find a place here.

Inworks offers a minor, an undergraduate certificate, and a graduate certificate in Human-Centered Design and Innovation.

Programs

- Human-Centered Design and Innovation Minor (p. 361)
- Human-Centered Design and Innovation Undergraduate Certificate (p. 362)

Inworks (IWKS)

IWKS 2100 - Human-Centered Design, Innovation and Prototyping (3 Credits)
Introduces collaborative interdisciplinary design and innovation from a human perspective. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Prereq: none. Participants of all backgrounds are encouraged to register; no previous design or prototyping experience is required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 2300 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with ENGR 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 3100 - 3D Design, Computation and Prototyping (3 Credits)
Introduces the design and computer-controlled fabrication of three-dimensional objects using both additive (3D printing) and subtractive (laser cutter, CNC router/mill) processes. Increasingly complex projects throughout the semester using various CAD/CAM software tools will explore design strategies for digital fabrication. Prerequisites: None; no previous design or prototyping experience is expected or required. Cross-listed with IWKS 5170 and ARCH 3706. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3180 - Inworks: Choose Your Own Adventure: Experiences in Design, Innovation and Prototyping (1-3 Credits)
Provides weekly speakers, workshops and other experiences that educate and enrich across the design, innovation and prototyping landscape. Students may choose to participate in any five (for one credit), ten (for two credits) or fifteen (for three credits) activities. Each week, participating students will attend the scheduled activity, and then create a meaningful response that reflects the impact of that activity on their thinking or practice. Prerequisites: None. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

IWKS 3200 - Data Science for Innovators (3 Credits)
Introduces techniques for capturing, processing, visualizing, and making meaning out of large datasets. With the exponential growth and decreasing cost of data collection tools such as genome sequencing, social media, crowd sourced data, mobile phone apps, remote sensors, and data from other publically available sources, innovators are able to harness a rich array of data in their designs. This course will introduce the fundamentals of working with online data and large data sets, introduce widely used data analysis and visualization tools, and culminate in a cumulative project that incorporates data in a significant way. Suggested Background: IWKS 2300 or similar experience. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 3300 - NAND to Tetris: Foundations of Computer Systems (3 Credits)
Introduces the principles of computer systems that underlie the global information age. Starting from first principles, students gradually construct a simple hardware platform and a modern software hierarchy, yielding a working basic yet powerful computer system. Only introductory programming experience is required. Suggested Background: IWKS 2300 or similar computing experience. Cross-listed with CSCI 2940. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3400 - Game Design and Development I (3 Credits)
Introduces principles of computer game development, building on the rich interplay of computer science, graphics design, physics, music, and narrative. Students develop interactive 2D and 3D games and a final project. Substantial software development involved, but requires only introductory programming experience. Suggested Background: IWKS 2300 or similar computing experience. Cross-listed with CSCI 2941. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3540 - Synthetic Biology for Innovators (3 Credits)
Introduces the fundamentals of synthetic biology for those who seek to use it as tool for innovation. Synthetic biology allows us to engineer new biological systems and redesign existing biological components by integrating aspects of biotechnology, evolutionary and molecular biology, systems biology, computer engineering, computational biology, and genetic engineering. Advancement in technological tools and techniques make this material accessible to motivated individuals from many disciplines, and no biology background is required. Culminates with a final team project focused on designing synthetic biology solutions that address human need. Suggested Background: None. No previous background in biology is required. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3550 - Innovation Law and Policy (3 Credits)
Introduces legal and regulatory foundations related to innovation, including intellectual property, telecommunications, electronic commerce, the Internet, biotechnology, ethical and equity considerations, and financing. These issues are examined from the perspectives of the legal, business, capital, development, consumer, and policy-making communities. Suggested background: IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3600 - Innovating for the Developing World (3 Credits)
Explores the design and development of products and services that can be sustainably and gainfully used by the world's poorest citizens. Students in interdisciplinary teams will design, implement and evaluate viable solutions to a real problem faced by people in the developing world. The goal is to develop an understanding of the extraordinary challenges faced by individuals for whom basic survival is not a given, and the knowledge and skills necessary to create designs that respond appropriately to those unique circumstances. Provides a foundation for further study and practice in the area of technology and development. Suggested Background: IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3620 - Mobile App Development (3 Credits)
Introduces mobile application development, including front-end mobile application clients, data handling, connectivity to back-end services and cloud hosting. The course provides an overview and comparison of technical approaches employed by Apple iOS, Google Android, and cross-platform development environments. Students will install, develop, test, and distribute mobile applications while addressing challenges associated with development for any mobile platform: limited screen size and memory, gesture based GUI, varying connectivity, and the wide variety of target mobile devices. Suggested Background: IWKS 2300 or similar computing experience. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3700 - Innovation and Society (3 Credits)
Analyzes impact of innovative design on work, sense of self and social systems, in education, healthcare, finance, and other sectors. Investigates how people customize / "hack" technologies they use, and the moral / ethical implications of being designers. Students will research the impact of an innovation of their choice and share via essays, models, videos, or another medium of their choice. Suggested Background: None. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3850 - Product Design (3 Credits)
Explores the design requirements associated with creating a product that will be manufactured in large quantities and used by potentially thousands of users. These requirements are often very different from those associated with creating a working prototype. This gap between prototype creation and starting a business offers an interesting and unique set of design challenges. As part of the course, teams of students will engage in a realistic product design cycle. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4100 - Human-Centered Design, Innovation and Prototyping (3 Credits)
Offers a graduate-level introduction to collaborative interdisciplinary design and innovation from a human perspective, as well as introducing key theoretical and computational foundations of innovation. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Prerequisite: None. No previous design or prototyping experience is expected or required. Cross-listed with IWKS 5100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4120 - IoT: The Internet of Things (3 Credits)
In a world where everything is connected to everything else, how does that work? This course introduces techniques for (1) designing systems that can sense the environment and respond to humans in meaningful ways and (2) creating networks of physical objects that collect and exchange data. Such systems might include wearable sensors, interactive art, and Internet-connected home devices. Working individually and in teams, students will develop projects using Inworks' materials, devices, and fabrication tools. The course involves considerable prototyping and software development but requires only introductory programming and prototyping experience. Suggested Background: IWKS 2100 & 2300. Cross-listed with CSCI 2942. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4450 - Game Design and Development II (3 Credits)
Continuation of IWKS 3400, with increased emphasis on more advanced techniques including 3D rendering; lighting simulation; vertex, pixel and geometry shaders; shadows; terrain building; bump, parallax, and parallax occlusion mapping; shading; ray tracing; bloom; and high dynamic range lighting. Suggested Background: IWKS 3400. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4500 - Bio-Design and Innovation (3 Credits)
Introduces the biodesign innovation process, which involves identifying important human needs and inventing meaningful solutions to address them. The course examines how biotechnology and bio-inspired innovation improve the form and function of our design world through innovative materials and novel approaches to developing buildings, food, medicine, infrastructure and more. Readings and in-class debates will raise critical issues in contemporary bioethics. For their final projects, students will choose to create and prototype a speculative biodesign concept, or work in the bio lab on the development of a real-world biodesign solution of their choosing. Suggested Background: IWKS 2100 & 3100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4520 - Design for Healthful Human Longevity (3 Credits)
Introduces contemporary studies, therapies, theories, and research on aging, age related disease, and innovations for longer healthier human lives. Guest lecturers, seminar discussions, readings and discussions will inform student projects that address challenges to prolonged, healthy, disease-free lives. Suggested Background: IWKS 2100 and 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4650 - Innovating for the Developing World (3 Credits)
Explores the design of products and services that can be sustainably used by the world's poorest citizens. Students design, implement and evaluate solutions to real problems in the developing world. Provides a foundation for further study and practice. Suggested Background: IWKS 3500 & 3600. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4680 - Case Studies in Design (3 Credits)
Explores why some projects succeed and others fail. Many human-centered interventions fail to meet their designers' objectives, reflecting the unique challenges associated with matching human need with feasibility. Explores how innovators can increase their chances for success by examining several successful (and unsuccessful) designs. Suggested Background: IWKS 2100 & 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4700 - Unconventional Design for Online Learners (3 Credits)
Explores how design-thinking and user-centered design can be used to develop and improve technology-mediated learning. Using a team-based project-oriented approach, students design, develop, and evaluate new modalities for digital education. Projects include ways to educate both general and targeted audiences. Suggested Background: IWKS 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4800 - StartUp: Creating a New Venture from Scratch (4 Credits)
Teams of students are guided to create and launch a new company in a single semester. Culminates in a "pitchfest" to area entrepreneurs and venture capitalists. One of two alternative capstone courses for the Inworks Minor in Design and Innovation. Requires enrollment in the Inworks HCDI minor or certificate, or instructor permission. Suggested Background: Completion of at least three other Inworks courses. Max hours: 4 Credits.
Grading Basis: Letter Grade

IWKS 4900 - Undergraduate Capstone (4 Credits)
Working closely with project sponsors, students design, implement, and evaluate a project for use in local industry and non-profit organizations. One of two alternative capstone courses for the Inworks Minor in Design and Innovation. Prereq: IWKS 2100 and enrollment in the Inworks HCDI minor or certificate. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: IWKS 2100 and enrollment in the Inworks HCDI minor or certificate

IWKS 4930 - Special Topics in Human Centered Design and Innovation (1-4 Credits)
Emergent issues and professional developments in design, innovation and prototyping. Consult the current online Inworks Course List for semester offerings as new special topics courses are frequently added. With permission, may be repeated for credit. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

IWKS 4970 - Independent Study in Human Centered Design and Innovation (1-4 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to design, innovation and prototyping. With permission, may be repeated for credit. Enrollment requires permission of an Inworks faculty member. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Human-Centered Design and Innovation Minor

Introduction

The Inworks minor in Human-Centered Design and Innovation is a flexible six-course program that allows you to explore design thinking, computational thinking, and radical interdisciplinarity, building toward innovation.

Inworks is a space that catalyzes meaningful collaboration, and students of all majors will find a place here. Why collaborate with students of different majors? The hardest problems we face need solutions, which are often found at the intersection of different disciplines. Without people from across the spectrum coming together, those solutions might not be discovered.

Also, no matter what you're studying, a focus on human-centered design will help you to deepen your understanding of the problems in your field, making you more effective as you navigate them.

Please contact your undergraduate advisor about adding the Human-Centered Design and Innovation minor or email us at inworks@ucdenver.edu for more information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual minor requirements.

• Click here (p. 109) for information about Academic Policies

Program Requirements

1. Any undergraduate student currently enrolled in a CU Denver degree program may earn a minor in Human-Centered Design and Innovation.
2. A Human-Centered Design and Innovation Minor plan of study must be completed and approved by an Inworks advisor.
3. A student must fulfill all prerequisites for the courses they select. See the catalog course descriptions for prerequisite information for each course.
4. Students may petition for another course to count towards the Human-Centered Design and Innovation Minor. This petition must be approved by an Inworks advisor.
5. All courses taken for the minor must be completed with a C- or better with a 2.5 GPA average for all six courses.

Code	Title	Hours
IWKS 2100	Human-Centered Design, Innovation and Prototyping [1]	3
Five additional IWKS courses		15
Total Hours		**18**

[1] This requirement may be satisfied by an equivalent or cross-listed course.

Human-Centered Design and Innovation Undergraduate Certificate

Introduction

Providing a basic understanding of design and innovation processes, the undergraduate certificate in Human-Centered Design and Innovation will prepare you to contribute to interdisciplinary teams that seek to address complex human problems.

Please contact your undergraduate advisor about adding the undergraduate Human-Centered Design and Innovation certificate or email us at inworks@ucdenver.edu for more information.

Certificate Eligibility

Any CU Denver undergraduate student, degree or non-degree seeking, is eligible to earn the certificate in Human-Centered Design and Innovation.

Students planning to pursue a Human-Centered Design and Innovation certificate should complete a certificate declaration form and obtain approval from an Inworks advisor.

Certificate Requirements

The following classes must be completed with a grade of C- or better.

Code	Title	Hours
IWKS 2100	Human-Centered Design, Innovation and Prototyping [1]	3
Two additional IWKS courses		6
Total Hours		**9**

[1] This requirement may be satisfied by an equivalent or cross-listed course.

Mechanical Engineering

Chair: Ronald A. L. Rorrer
Office: North Classroom 2024
Telephone: 303-315-7500
Email: mechanical@ucdenver.edu
Website: e (https://ucdenver.edu/mechanical-engineering/)ngineering.ucdenver.edu/mechanical (https://engineering.ucdenver.edu/mechanical/)

Overview

Mission Statement

The mission of the Department of Mechanical Engineering is to contribute to the economic development of the state of Colorado and the Denver metropolitan area by providing high-quality bachelor's, master's (MS and MEng), and PhD programs in mechanical engineering for a diverse group of working students.

Program Objectives

The program offered by the Department of Mechanical Engineering of the University of Colorado Denver can be completed in the afternoon and evening hours to accommodate both working and traditional students. The department seeks to graduate a diverse population of students with bachelor's degrees who within a few years of graduation are able to:

1. be employed by a diverse group of industries, research laboratories, and educational institutions
2. pursue careers in engineering, interdisciplinary areas, research, and education
3. pursue post-graduate education and advanced degrees.

Undergraduate Information

The mechanical engineer is concerned with satisfying the needs of society using a combination of material, human and economic resources. Mechanical engineering covers a wide spectrum of activities in the engineering profession. These activities include the conversion and transmission of energy and associated power processes; the kinematic, dynamic, strength, and wear considerations, as well as economic aspects of the development, design, and use of materials, machines, and processes; and the analysis, synthesis, and control of entire engineering systems.

The mechanical engineering curriculum begins with a strong emphasis on mathematics, physics, and chemistry. It continues with a concentration in engineering sciences, including solid and fluid mechanics; thermodynamics, heat, and mass transport; materials; and systems analysis and control. It concludes with laboratory and design courses that demonstrate the ways in which scientific knowledge is applied in the design and development of valuable devices and manufacturing processes.

The mechanical engineering program may be roughly subdivided into two-year groupings. In the first two years, the program emphasizes the fundamentals of mathematics and basic science that are essential for an understanding of most branches of engineering. In the last two years of the program, the curriculum emphasizes engineering science and design and provides technical electives in the following areas:

- thermodynamics
- heat transfer
- fluid mechanics
- solid mechanics
- motorsports engineering
- bioengineering
- dynamics and controls
- computer-aided design and manufacturing
- composite materials
- additive manufacturing
- computational solid and fluid mechanics
- design engineering and science

Concurrent Bachelor's/Master's Degrees

In addition to the bachelor of science in mechanical engineering, the department offers a concurrent bachelor's/master's degree. Students wishing to obtain a BS degree with a major in mechanical engineering and either the MS or the MEng degree in mechanical engineering may do so with up to 6 semester hours of 5000-level or above courses applying to both degrees. The 5000-level courses must meet the degree requirements for the graduate degree and must be suitable technical electives for the undergraduate degree. This option is open only for students seeking both degrees at CU Denver. Students must meet admission requirements to be accepted into the graduate program. Completion of two 5000-level courses does not guarantee admission into the graduate program. Please see an advisor for restrictions and guidelines.

Programs

- Mechanical Engineering, BS (p. 370)

Faculty

Associate Professors:

R. Dana Carpenter, PhD, Stanford University
Kannan N. Premnath, PhD, Purdue University
Ronald A. L. Rorrer, PhD, Virginia Polytechnic Institute and State University, PE-Colorado
Samuel W. J. Welch, PhD, University of Colorado Boulder
Christopher M. Yakacki, PhD, University of Colorado Boulder

Assistant Professors:

Brecca Gaffney, PhD, University of Denver
Guoying Dong, PhD, McGill University
Kai Yu, PhD, Georgia Tech University
Linyue Gao, PhD, Iowa State University
Maryam Darbeheshti (clinical teaching track)**,** PhD, University of Denver

Senior Instructor:

Joseph F. Cullen Jr., MS, University of Colorado

Instructor:

Douglas Gallagher, BS engineering physics, Colorado School of Mines

Professors Emeriti:

James Gerdeen, PhD, Stanford University
Peter E. Jenkins, PhD, Purdue, MBA, Pepperdine, Professional Engineer, PE-Texas
J. Kenneth Ortega, PhD, University of Colorado Boulder

Associate Professor Emeritus:

B. Thomas Arnberg, MS, University of Colorado

Engineering (ENGR)

ENGR 1100 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with IWKS 2300 and MECH 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGR 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

Mechanical Engineering (MECH)

MECH 1025 - CAD and Graphics for Mechanical Engineering (3 Credits)
Introduction to 3-D computer-aided design software, solid modeling, industry-standard engineering drawing practices, and engineering graphics. Applications to mechanical engineering. Prereq: High School Geometry and Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 1045 - Manufacturing Processes Design (3 Credits)
Basic manufacturing background will be provided to engineering students in order to: (1) apply manufacturing specifications to the design of mechanical devices, and (2) communicate with technical personnel in a production environment. Topics cover metal casting, bulk and sheet metal forming, material removal and joining and fastening processes. Prereq: MECH 1025 or CVEN 1025 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 1025 or CVEN 1025 with a C- or higher

MECH 1100 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with ENGR 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MECH 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, ENGR 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MECH 1208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 2023 - Statics (3 Credits)
A vector treatment of force systems and their resultants; equilibrium of trusses, beams, frames, and machines, including internal forces and three-dimensional configurations, static friction, properties of areas, distributed loads and hydrostatics. Prereq: PHYS 2311 with a C- or higher. Coreq: MATH 2411. Cross-listed with CVEN 2121. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 with a grade of C- or higher Coreq: MATH 2411

MECH 2024 - Introduction to Materials Science (3 Credits)
The development of the physical principles relating the structural features of materials to their observed properties. Prereq: ENGR 1130 or CHEM 1130 or (CHEM 2031 and CHEM 2038 and CHEM 1999AE). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGR 1130 or CHEM 1130 or (CHEM 2031 and CHEM 2038 and CHEM 1999AE) with a C- or higher.

MECH 2030 - Analysis Techniques in Mechanical Engineering (3 Credits)
Introduces experimental methods and mathematical analysis used in engineering. Spreadsheets are used to analyze engineering data and prepare tables and graphs. Introduction to computer programming using MATLAB. Prereq: MATH 1401 and MECH 1025 with a grade of C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 and MECH 1025 with a C- or higher

MECH 2033 - Dynamics (3 Credits)
A vector treatment of dynamics of particles and rigid bodies, including rectilinear translation, central-force, and general motion of particles, kinematics of rigid bodies, the inertia tensor, plane motion of rigid bodies, energy and momentum methods for particles, systems of particles, and rigid bodies. Prereq: MECH 2023 or CVEN 2121 with a C- or higher. Cross-listed with CVEN 3111. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

MECH 2034 - Properties of Engineering Materials (1 Credit)
Experiments to determine material properties and the effect of processing on properties important in mechanical design. Materials include metal, polymers, and composites. Loadings include tension, compression, and bending under static, dynamic impact and creep states. Coreq: MECH 2024. Max hours: 1 Credits.
Grading Basis: Letter Grade
Coreq: MECH 2024

MECH 2208 - Special Topics: 2208-2298 (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 3010 - Elementary Numerical Methods and Programming (3 Credits)
A development of basic numerical methods used to solve engineering problems. Introduction to MATLAB to implement numerical simulations. Coreq: MATH 3195 (or MATH 3191 and MATH 3200). Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 3195 (or MATH 3191 and MATH 3200). Restricted to majors in CEDC Mechanical Engineering.

MECH 3012 - Thermodynamics (3 Credits)
Introduces thermodynamic properties and state relationships, processes and cycles with work and heat transfer. Applications of the first and second laws to energy-related engineering systems. Prereq: MATH 1401 and PHYS 2311 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 and PHYS 2311 with a C- or higher

MECH 3021 - Introduction to Fluid Mechanics (3 Credits)
Applies exact and approximate theories to engineering problems in fluids. Examples include potential flow theory, Euler's equations for inviscid fluids, Bernoulli's equations, Navier-Stokes equations, and pipe flow. Prereq: MECH 2033, MECH 3012 and MATH 2421 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033, MECH 3012 and MATH 2421 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3022 - Thermodynamics II (3 Credits)
Generalized thermodynamic cycles; general thermodynamic cycle considerations, compressor, expander, heat exchanger processes, refrigeration cycles, mixtures and combustion. Prereq: MECH 3012 or ENGR 3012 and MATH 2421 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: (MECH 3012 or ENGR 3012) AND MATH 2421 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 3027 - Measurements (3 Credits)
Principles of digital and analog measurements; systems for sensing, transporting, modifying, and outputting information; systematic and random error analysis. The laboratory includes a variety of instruments and components illustrating fundamental experimental measurement techniques and methods. Prereq: MECH 3030 or ELEC 3030, MATH 3195 or (MATH 3191 & MATH 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3030 or ELEC 3030, MATH 3195 or (MATH 3191 MATH 3200) with a C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3028 - Laboratory of Mechanical Measurements (1 Credit)
Modern techniques for Mechanical measurements. Laboratory includes techniques for the calibration of transducers and analysis of Statistical uncertainty. Data Acquisition Systems used for Signal acquisition and measurement of common mechanical quantities, such as displacement, velocity, acceleration and force. Design and characterization of a second order measurement system based on strain gages. Coreq: MECH 3027. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MECH 3027

MECH 3030 - Electric Circuits and Systems (3 Credits)
Basic electrical engineering concepts for non-majors. Basic study of circuit analysis (RLC and Op-amps), transformers and motor equations, and simple electronic circuits (diodes and transistors). Prereq: MATH 2421 and PHYS 2331 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with ELEC 3030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 and PHYS 2331 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3031 - Fluids/Thermal Laboratory (1 Credit)
Laboratory exercise in compressible and incompressible fluid flow; steady state and transient heat transfer. Prereq: MECH 3012 with a grade of C- or higher. Coreq: MECH 3021 and CVEN 3313. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 1 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3012 with a C- or higher Coreq: MECH 3021 or CVEN 3313 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3032 - Electric Circuits and Systems Lab (1 Credit)
Basic electrical engineering lab for MECH majors. Coreq: MECH 3030 or ELEC 3030. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 1 Credits.
Grading Basis: Letter Grade
Coreq: MECH 3030 or ELEC 3030 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3035 - Design of Mechanical Elements (3 Credits)
Review of mechanics of materials and stress analysis; detailed design of various machine elements such as fasteners, springs, brakes and gears. Includes design project. Prereq: MECH 2024 and MECH 3043 with a grade C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2024 and MECH 3043 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3042 - Heat Transfer (3 Credits)
Basic laws of heat transfer by conduction, convection, and radiation with engineering design applications. Includes design project. Prereq: MECH 3021 with a grade C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3021 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3043 - Strength of Materials (3 Credits)
Application of exact and approximate theories of stress and displacement to engineering problems in solids. Examples include torsion of rods and bending of beams. Combined stresses, principal stresses and energy methods are examined. Prereq: MECH 2023 or CVEN 2121 with a C- or higher. Cross-listed with CVEN 3121. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

MECH 3045 - Principles of Additive Manufacturing (3 Credits)
This course will introduce students to additive manufacturing (AM) techniques and design for additive manufacturing (DfAM). Additive manufacturing is no longer thought of as simply “rapid prototyping,” but is influencing the way manufacturing is performed at almost every level of the product lifecycle. It will influence practically every manufacturing system of the future. This course will cover the fundamentals, applications, and implications of AM such that students will understand why and when to use AM, as well as challenge their traditional thinking of design and what is possible. At the end of this course, students should be able to: (1) Describe the 7 processes of AM, and understand their advantages and limitations. (2) Have hands-on experience in using several different AM processes, including building, modifying, and repairing their own AM machine. (3) Understand the wide variety of AM applications beyond prototyping. This includes tooling, production, performance improvement, customization, art, and more. (4) Understand how AM can be used in a product’s lifecycle from beginning to end. (5) Use “generative design software” and "topology optimization" to unlock complex designs to be created with AM. (6) Assess the cost and value of AM processes. Prereq: MECH 1045 and MECH 2024 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 1045 and MECH 2024 with a grade of C- or higher.

MECH 3065 - Intermediate Dynamics (3 Credits)
An in-depth study of Newtonian dynamics with constraints. Mechanism synthesis using graphical and analytic techniques. Prereq: MECH 2033 or CVEN 3111 and MECH 3010 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033 or CVEN 3111 and MECH 3010 with a C- or higher
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3147 - Bioengineering (3 Credits)
Explores engineering principles that have application in biology, and principles discovered in biology which may have application in engineering. Some topics covered are: cell biology, molecular biology, viscoelasticity, physical theory of plant cell growth aerodynamics, fluid mechanics, biofluid dynamics and animal flight. Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 3208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3840 - Independent Study (1-3 Credits)
This category is intended for upper-division level special topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3939 - Internship (1-3 Credits)
Undergraduate internship course for credit. Must be approved by department and handled subject to experiential learning office rules. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4020 - Biomechanics (3 Credits)
Static and dynamic biomechanical analysis, effects of mechanical loading on bone and cartilage, design considerations in orthopaedic devices, muscle function, biomechanics of human movement, cardiovascular biomechanics. Prereq: MECH 2023, 2033, MATH 3195 or 3200 with a C- or higher. Cross-listed with MECH 5020. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023, 2033, MATH 3195 or 3200 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing
Typically Offered: Summer.

MECH 4023 - System Dynamics II: Controls (3 Credits)
Introduces the Laplace Transformation. Control system analysis using root locus and frequency response methods. Basic compensation techniques are to be covered. Prereq: MECH 3023 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3023 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4024 - Mechanical Behavior of Materials (3 Credits)
Studies the response of materials to applied stresses. Emphasis is on the understanding of the relationships between structure and properties. Fracture mechanics and fatigue are introduced. Prereq: MECH 3024 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3024 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4025 - Advanced Biomechanics (3 Credits)
This course provides training in computational and experimental methods for biomechanical engineering analysis. Topics include finite element analysis of biological systems, orthopedic device design, medical imaging analysis, mechanical characterization of biological tissues, and biomechanics of human movement. Prereq: MECH 4020. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4020

MECH 4030 - Experimental and Computational Methods of Human Movement (3 Credits)
The objective of this course is to provide an overview of the various experimental and computational tools to measure and study human movement. Using a motion capture laboratory and musculoskeletal modeling, these tools will be used to develop a thorough understanding of how engineering principles can be used to address the major challenges of human movement biomechanics, with a primary emphasis on experimental measurement methods and simulations of movement. These tools will be used to explore the interaction of musculoskeletal properties, including whole#body and joint level biomechanics, with the environment during dynamic motion. Course topics include neuromuscular mechanics, balance performance, inverse dynamics, simulation of dynamic muscle#tendon mechanics, and musculoskeletal model development. Cross-listed with MECH 5030. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MECH 4035 - Senior Design I (3 Credits)
Group and individual projects to design engineering components and systems. Design methodology, product specs, creativity, design reviews, communication, presentations, and report writing are emphasized. MECH 4035 and MECH 4045 form a one year sequence and must be taken consecutively. Prereq: MECH 3035 with a grade C- or higher and 40 hours of MECH courses. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade C- or higher and 40 hours of MECH courses. Restricted to majors in CEDC Mechanical Engineering.

MECH 4045 - Senior Design II (3 Credits)
Student teams manufacture and construct and/or redesign mechanical parts or assemblies that they designed in previous course (MECH 4035). A proposal, oral progress reports, and a final written report and demonstration are required. MECH 4035 and MECH 4045 form a one year sequence and must be taken consecutively. Prereq: MECH 4035 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4110 - Numerical Methods for Engineers (3 Credits)
Introduces numerical analysis. Solution of linear and nonlinear equation systems. Numerical methods for ordinary and partial differential equations. Engineering applications. Prereq: MATH 3195 or (3191 and 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4112 - Internal Combustion Engines (3 Credits)
Students obtain a sufficient understanding of internal combustion engines that will allow them to perform analysis of combustion thermodynamics and actual cycles, including heat addition, heat loss, air/fuel flow, and engine design and performance. Prereq: MECH 3012 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5112. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3012 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4114 - Designing with Composites (3 Credits)
Analysis and design of polymers and polymer-based composites. Failure criteria include static strength, stiffness, creep, fatigue, impact and fracture toughness. Design criteria include strength-to-weight ratio and cost-to-strength ratio. Prereq: MECH 3043 or CVEN 3121 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5114. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3043 or CVEN 3121 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4115 - Applied Plasticity and Creep (3 Credits)
Plastic deformation of materials applied to bulk and sheet metal manufacturing processes such as extrusion, rolling and sheet metal. Linear and nonlinear viscoelastic creep with applications to plates and shells. Prereq: MECH 3043 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5115. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3043 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4116 - Robotics (3 Credits)
Introduces kinematics, dynamics, and control of robot manipulators. Emphasis is placed on computer use in control of actual robots and in computer simulation of mathematical models of robots. Students must turn in a project report based on the computer simulation. Prereq: MECH 3065 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3065 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4120 - Methods of Engineering Analysis (3 Credits)
Selected topics from real analyses with applications to engineering analyses. Topics include vector calculus, ordinary differential equations, partial differential equations, and calculus of variations. Prereq: MATH 3195 or (MATH 3191 and MATH 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5120. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4132 - Power Plant Systems Design (3 Credits)
Detailed engineering analysis and design of a thermal power plant, including heat balance, selection of equipment (boiler, turbines, heat exchangers, pumps, cooling tower), performance evaluation, economic evaluation and feasibility studies. Prereq: MECH 3022 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3022 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4135 - Mechanical Systems Design (3 Credits)
Detailed engineering design of mechanical systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 3035 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4136 - Control Systems Design (3 Credits)
Detailed engineering design of control systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 4023 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4023 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4141 - Fluid Mechanics (3 Credits)
Viscous incompressible fluid flows. Topics include derivation of equations governing viscous compressible fluid motion; specializations to simple flows; boundary-layer theory; similarity solutions; introduction to turbulence and Reynolds stresses. Prereq: MECH 3021 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5141. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3021 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4142 - Thermal Systems Design (3 Credits)
Detailed engineering design of thermal/fluids systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 3010, MECH 3021, and MECH 3042 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3010, MECH 3021 and MECH 3042 with a grade of C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 4147 - Engineering Economy (3 Credits)
Applies economic and financial principles to evaluation of engineering alternatives. Calculation of annual costs, present worth, and prospective rates of return on investment. Review of systems analysis techniques, including simulation, linear programming, and project scheduling. Restriction: Restricted to MECH majors at the junior or higher level standing within the College of Engineering, Design and Computing. Cross-listed with CVEN 4077. Max Hours: 3 Credits. Semester Hours: 3 to 3
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors at the junior or higher level standing within the College of Engineering, Design and Computing

MECH 4155 - Air Conditioning Design (3 Credits)
Basic principles of heating and ventilating systems. Determination of heating and cooling loads. Design and layout of heating, ventilating, and air conditioning systems. Includes design project. Prereq: MECH 3022 and MECH 3042 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3022 and 3042 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4160 - Introduction to Operations Research (3 Credits)
Introduces operations research, including mathematical programming models, models for decision alternatives, for procurement and inventory, and for queuing operations. Prereq: MATH 3195 or (MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4163 - Rigid-Body Dynamics (3 Credits)
Review of Newtonian dynamics, Lagrange's equations for particles, systems, and rigid bodies. Conservative and non-conservative systems, moments of inertia, principal axes, angular momentum and Euler equations. Illustrations from spinning bodies, including tops, gyro-compass and rotating machinery. Prereq: MECH 2033 or CVEN 3111, MATH 3195 or (MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5163. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033 or CVEN 3111 and (MATH 3195 or MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4166 - Computerized Numerical Control (CNC) Manufacturing (3 Credits)
Modern manufacturing engineering concepts using computerized numerical control (CNC). The students learn state-of-the-art CNC methodologies, including digitizing, drawing, generating codes, and manufacturing, using modern CNC machines. Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing. Cross-listed with MECH 5166. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 4175 - Finite Element Analysis in Machine Design (3 Credits)
Students learn basic theory of finite element analysis (FEA) as it applies to stress analysis and design of mechanical components. Commercial package will be used giving students practical experience in the use of FEA. Prereq: MECH 3035 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5175. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4176 - Introduction to Sports Engineering (3 Credits)
Sports Engineering requires working both with the principles of biomechanics and the principles of engineering design and analysis. Using biomechanics is necessary in understanding the forces on the interface between the human athlete and his/her equipment. Recommended Prereq: MECH 2033, 3012 and 3021. Cross-listed with MECH 5176. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4177 - Energy Conversion (3 Credits)
This introductory Energy Conversion course introduces the basic background, terminology, and fundamentals of various forms of energy conversion. The topics covered will include: fuel cells, batteries, photovoltaic systems, solar thermal, and wind energy. Recommended Prereq: MECH 3012. Cross-listed with MECH 5177. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4178 - Solar Engineering (3 Credits)
This course provides the student with the basic ideas and calculation procedures on how solar processes work and how their performance can be predicted. Recommended Prereq: MECH 3012. Cross-listed with MECH 5178. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4179 - Introduction to Turbomachinery (3 Credits)
This introductory Turbomachinery course introduces the basic background, terminology, and fundamentals of various forms of turbomachines. The analysis of the various turbomachines will be focused on the performance of the tubomachine. Recommended Prereq: MECH 3012. Cross-listed with MECH 5179. Max hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4195 - Solid Modeling (3 Credits)
This is a basic course in solid modeling using Solid Works computer software. Topics include feature-based modeling, parametric part design, parent/child relationships, use of datums, patterning, relations, sweeps, blends, assembly, tolerancing, rapid prototyping, CNC manufacturing, CMM inspection, and Step standards. Restriction: Restricted to major in CEDC Mechanical Engineering with junior standing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 4208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Cross-listed with MECH 5208. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 4228 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 4238 - Special Topics (1-3 Credits)
Restricted to majors in CEDC Mechanical Engineering. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4840 - Independent Study (1-3 Credits)
This category is intended for upper division level special topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Restriction: Restricted to majors in CEDC Mechanical Engineering. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

Mechanical Engineering, BS

Introduction

Please click here (p. 363) to see the Mechanical Engineering department information.

The mechanical engineer is concerned with satisfying the needs of society using a combination of material, human and economic resources. Mechanical engineering covers a wide spectrum of activities in the engineering profession. These activities include the conversion and transmission of energy and associated power processes; the kinematic, dynamic, strength, and wear considerations, as well as economic aspects of the development, design, and use of materials, machines, and processes; and the analysis, synthesis, and control of entire engineering systems.

The program offered by the Department of Mechanical Engineering of the University of Colorado Denver can be completed in the afternoon and evening hours to accommodate both working and traditional students. The department seeks to graduate a diverse population of students with bachelor's degrees who within a few years of graduation are able to:

1. Be employed by a diverse group of industries, research laboratories, and educational institutions
2. Pursue careers in engineering, interdisciplinary areas, research, and education
3. Pursue postgraduate education and advanced degrees

The mechanical engineering curriculum begins with a strong emphasis on mathematics, physics, and chemistry. It continues with a concentration in engineering sciences, including solid and fluid mechanics; thermodynamics, heat, and mass transport; materials; and systems analysis and control. It concludes with laboratory and design courses that demonstrate the ways in which scientific knowledge is applied in the design and development of valuable devices and manufacturing processes.

The mechanical engineering program may be roughly subdivided into two-year groupings. In the first two years, the program emphasizes the fundamentals of mathematics and basic science that are essential for an understanding of most branches of engineering. In the last two years of the program, the curriculum emphasizes engineering science and design and provides technical electives in the following areas:

- thermodynamics
- heat transfer
- fluid mechanics
- solid mechanics
- motorsports engineering
- bioengineering
- dynamics and controls
- computer-aided design and manufacturing
- composite materials
- additive manufacturing
- material science
- computational solid and fluid mechanics
- design engineering and science

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 296) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Engineering, Design and Computing Graduation Requirements (p. 295)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. CVEN 2121 Analytical Mechanics I and CVEN 3111 Analytical Mechanics II may be substituted for MECH 2023 Statics and MECH 2033 Dynamics respectively.

2. Not all courses may be offered every semester.
3. Students must maintain a minimum 2.0 GPA in all courses applying to major requirements.
4. Students must maintain a minimum 2.0 GPA in all MECH courses attempted.
5. Students must complete a minimum of 128 semester hours of course work.
6. The last 30 hours must be earned as a degree-seeking student in the College of Engineering, Design and Computing at CU Denver.

Code	Title	Hours
Required Courses		
MECH 1025	CAD and Graphics for Mechanical Engineering	3
MECH 1045	Manufacturing Processes Design	3
MECH 1100	Fundamentals of Computational Innovation	3
MECH 1200	Fundamentals of Engineering Design Innovation	3
MECH 2023	Statics	3
or CVEN 2121	Analytical Mechanics I	
MECH 2033	Dynamics	3
or CVEN 3111	Analytical Mechanics II	
ELEC 3030	Electric Circuits and Systems	3
MECH 2024	Introduction to Materials Science	3
MECH 2034	Properties of Engineering Materials	1
MECH 3010	Elementary Numerical Methods and Programming	3
MECH 3012	Thermodynamics	3
MECH 3021	Introduction to Fluid Mechanics	3
MECH 3022	Thermodynamics II	3
MECH 3027	Measurements	3
MECH 3028	Laboratory of Mechanical Measurements	1
MECH 3031	Fluids/Thermal Laboratory	1
MECH 3032	Electric Circuits and Systems Lab	1
MECH 3035	Design of Mechanical Elements	3
MECH 3042	Heat Transfer	3
MECH 3043	Strength of Materials	3
MECH 4023	System Dynamics	3
MECH 4035	Senior Design I	3
MECH 4045	Senior Design II	3
MECH 4142	Thermal Systems Design	3
Technical Electives		
Select 9 semester hours of the following:		9
MECH 2208/4208/5208	Special Topics: 2208-2298 [1]	
MECH 3045	Principles of Additive Manufacturing	
MECH 3939/5939	Internship	
MECH 4020/5020	Biomechanics	
MECH 4025/5025	Advanced Biomechanics	
MECH 4110	Numerical Methods for Engineers	
MECH 4114	Designing with Composites	
MECH 4116	Robotics	
MECH 4120	Methods of Engineering Analysis	
MECH 4141	Fluid Mechanics	
MECH 4147	Engineering Economy	
MECH 4163	Rigid-Body Dynamics	
MECH 4175	Finite Element Analysis in Machine Design	
MECH 4176	Introduction to Sports Engineering	
MECH 4177	Energy Conversion	
MECH 4178	Solar Engineering	
MECH 4228/5228	Special Topics (Special Topics)	

Mathematics		
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 2421	Calculus III	4
MATH 3195	Linear Algebra and Differential Equations	4
Science		
ENGR 1130	Chemistry for Engineers	5
PHYS 2311	General Physics I: Calculus-Based	4
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2331	General Physics II: Calculus-Based	4
PHYS 2341	Intro Experimental Phys Lab II	1
Total Hours		**104**

[1] Intro to Comp Fluid Dynamics, Buckling & Stability, Prototyping, Low Speed Aerodynamics, Feedback and Optimal Control, Tribology, Intermediate Controls, Road Vehicle Dynamics, IC Engines, Linear Optimal Control, Experimental Mechanics, Vehicle Instrumentation, LA Green Roof, Introduction to Aerodynamics, Vehicle Design, Polymer Viscoelasticity, Robotics

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/cedc/).

College of Liberal Arts & Sciences

Leadership

DEAN

Pamela Jansma, Professor of Geography and Environmental Sciences

ASSOCIATE DEANS

Richard Allen, Associate Dean for Academic and Strategic Planning; Professor of Psychology
Laura Argys, Associate Dean for Research and Creative Activities; Professor of Economics
Faye Caronan, Associate Dean for Faculty and Staff Affairs; Associate Professor of Ethnic Studies
Marjorie Levine-Clark, Associate Dean for Diversity, Outreach and Initiatives; Professor of History
John Swallow, Associate Dean for Student Success; Professor of Biology

College of Liberal Arts and Sciences Educational Goals

A CU Denver liberal education combines world-class knowledge in specific disciplines with the comprehensive skills and dispositions that students need for success and that our society needs its citizens to possess. In a world where content knowledge rapidly becomes obsolete and where graduates may have a dozen different jobs, these skills and dispositions are crucial. Employers increasingly look for employees who can think critically, communicate clearly, and solve complex problems. A liberal education may be the most vocational education that today's student can earn. A liberal arts and sciences education truly is "learning with purpose."

The College of Liberal Arts and Sciences provides undergraduates at CU Denver with a broad and multilayered education consisting of:

1. **In-depth knowledge** of the major disciplines of the humanities, natural and physical sciences, and social and behavioral sciences that call the College of Liberal Arts and Sciences home.
2. **Intellectual and practical skills**, including inquiry and analysis, critical thinking, creative thinking, written communication, oral communication, university-level reading, quantitative literacy, information literacy, teamwork, and complex problem solving-practiced at progressively more challenging levels.
3. **Personal and social responsibility**, including civic knowledge and engagement (local and global), intercultural knowledge and competence, ethical reasoning and action, and foundation of skills for lifelong learning.
4. **Integrative and applied learning**, synthesizing knowledge and skills from multiple disciplines and experiences to address complex, real-world problems in our diverse local, national and global communities.

The mission of the College of Liberal Arts and Sciences is to foster academic excellence, to create and impart knowledge critical to a modern society and a global economy, and to ensure the acquisition of skills essential for professional careers and graduate study. Our vision is to enact a new paradigm for a liberal arts education that retains the proven values of a broad education while imparting career-oriented skills throughout the curriculum.

Today's university graduates need to be critical thinkers who are able to apply knowledge and skills from multiple disciplines to unscripted, real-world problems. A College of Liberal Arts and Sciences (CLAS) education involves mastery of essential learning outcomes, such as creative problem solving, oral and written communication, quantitative literacy, intercultural competence, and ethical reasoning, which provide students with the tools to become lifelong learners who are adaptive and innovative. While establishing a broad foundational education, CLAS gives students the opportunity to dig deeply into disciplinary and interdisciplinary majors, which train them in scholarly fields, traditions, and methods of analysis. This combination of breadth and depth prepares students for our twenty-first century world, which requires flexibility and mobility, as new jobs develop and careers change at an ever-faster pace. CLAS graduates enter a wide variety of occupations and pursue advanced degrees in academia and in professions like law and medicine.

The CLAS curriculum provides rigorous academic programs while offering a number of flexible learning opportunities, such as the Individually Structured Major, to meet our students' varied needs and objectives. The college draws on our downtown location and makes use of the city's many resources through student internships, experiential learning programs, and partnerships with Denver businesses and non-profit organizations. CLAS students have excellent opportunities to participate in first-class faculty research, and the college prides itself on its faculty-mentored undergraduate research programs and applied research in the community.

Explore CLAS Undergraduate programs here (p. 374).

For more information about CLAS, visit our website. (https://clas.ucdenver.edu/)

Learn more about CLAS undergraduate academic advising. (p. 117)

Contact Information

CLAS Dean's Office
North Classroom, Suite 5014
Phone: 303-315-7000
Fax: 303-315-7016
Email: clasdeansoffice@ucdenver.edu
Website: https://clas.ucdenver.edu/about-us/deans-office (https://clas.ucdenver.edu/about-us/deans-office/)

Mailing Address
College of Liberal Arts and Sciences
Campus Box 144
P.O. Box 173364
Denver, CO 80217-3364

College of Liberal Arts & Sciences Admissions and Student Success Information

First time to college applicants whose cumulative GPA and test scores meet or exceed the middle 50 percent range are considered strong candidates for admission to the College of Liberal Arts and Sciences. Visit Undergraduate Admissions (p. 37) information to learn more.

A cumulative GPA of 2.400 or higher is required for transfer applicants; however, applicants with a 2.000 cumulative GPA are considered. Visit Transfer Admissions (p. 38) information to learn more.

Jaimie Carrington (https://clas.ucdenver.edu/jaimie-carrington/)

Program Director Undergraduate Recruitment, Admissions, and Student Success

Jaimie Carrington works with students to help them navigate the admissions process, bring students to campus to experience what it's like to be a CU Denver student, and to support processes and policies that assist students in their transition to the college. She enjoys watching students she meets at New Student Orientations all the way through graduation and onward towards their future goals. Jaimie is a transplant from Texas but has been growing roots in Colorado since joining the CLAS Advising team in 2016. Born and raised in the Dallas/Fort Worth area, she moved across the state to earn her Bachelor of Science in Mathematics and Master of Education in Leadership and Policy Studies from the University of Texas at San Antonio. Jaimie started her diverse career in education in 2006 and has been supporting inclusive student success from K-12 through graduation and beyond.

jaimie.carrington@ucdenver.edu (
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(**For Graduate Programs and information please refer to the** Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/**) catalog.**)

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College of Liberal Arts & Sciences Graduation Requirements

For additional information regarding CU Denver Graduation policies and procedures, please visit the Graduation section of the catalog.

For additional information regarding CLAS Undergraduate academic policies and procedures, please visit the CLAS Policies (p. 380) tab.

CLAS Graduation Requirements

Code	Title	Hours
All CLAS majors must complete the following CLAS Graduation Requirements, in addition to the CU Denver Core requirements, major, minor and certificate program requirements.		**15-26**
A single course may fulfill multiple requirements in the following areas: CU Denver Core Curriculum, CLAS Graduation requirements, a major program, a minor program, or a certificate program, with the following exceptions:		
The course cannot fulfill two CLAS Graduation requirements.		
The course cannot fulfill CLAS Graduation requirements, if it is already fulfilling CU Denver Core Curriculum.		
Major, minor and certificate programs may impose restrictions around double counting courses. Students should consult catalog entries for CLAS programs to learn about program specific restrictions.		
Complete three credit hours from the approved Communicative Skills course list, with a C- or higher.		*3*
Courses taken using P+/P/F or S/U grading cannot apply to the Communicative Skills requirement.		
Communicative Skills (p. 376)		
Complete the Second Language Proficiency Requirement.		*0-10*
Courses taken using P+/P/F or S/U grading cannot apply to the Second Language Proficiency requirement.		
Second Language Proficiency (p. 376)		
Complete three Humanities credit hours.		*3*
Humanities (p. 378)		
Complete three Behavioral Sciences credit hours.		*3*
Behavioral Sciences (p. 379)		
Complete three Social Sciences credit hours.		*3*
Social Sciences (p. 379)		
Complete three-four Natural and Physical Sciences, Mathematics credit hours.		*3-4*
Natural and Physical Sciences, Mathematics (p. 379)		

Communicative Skills

Code	Title	Hours
Complete one of the following. Students must complete this requirement with a minimum grade of C- or higher. Courses taken using P+/P/F or S/U grading cannot apply to the Communicative Skills requirement.		*3*
COMM 2050	Professional Presentations	
COMM 1001	Presentations and Civic Life	
ENGL 3001	Critical Writing	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENGL 4175	Writing in the Sciences	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
HIST 2001	The Uses and Misuses of History	
PHIL 2441	Logic, Language and Scientific Reasoning	

Second Language Proficiency

Code	Title	Hours
Students must complete this requirement with a minimum grade of C- or higher. Courses taken using P+/P/F or S/U grading cannot apply to second language proficiency requirements.		*0-10*
Students can fulfill second language proficiency through one of the following ways:		
Completion of a second semester or higher college-level language course taught in the designated non-English language with a minimum grade of C- (1.7). American Sign Language is included. CU Denver second language courses are represented in the course list below.		
Satisfactory proficiency testing, i.e.CU Denver Modern Language Placement Testing, BYU FLATS (Foreign Language Achievement Testing Services), CLEP.		
Completion of a second-year/level II high school non-English language course or higher with a minimum grade of C- (1.7) in the second semester of the second-year or later. No college credit is earned for high school coursework.		
Completion of one year of AP non-English Language & Culture, AP non-English Literature & Culture, IB non-English Language B or IB Classical Language courses with a minimum of C- (1.7) or higher. No college credit is earned for AP or IB coursework, unless the student earns a sufficient score on the corresponding exam. Note: the one year of AP or IB courses must be in the same content area and non-English or Classical language.		
Student has temporary valid non-immigrant visa status, is from a non-English speaking country and meets the CU Denver English Language Proficiency requirements for admission.		
Students whose primary language is not English may provide official documentation and/or satisfactory proficiency testing results to demonstrate their primary language proficiency.		

Students who are unsure should consult with their CLAS advisor to determine whether they have met the secondary language proficiency requirement, prior to completing coursework.

CU Denver Second Language Options

Arabic

Code	Title	Hours
ARAB 1020	Beginning Arabic II	5
ARAB 2110	Intermediate Arabic I	3
ARAB 2120	Intermediate Arabic II	3

Chinese

Code	Title	Hours
CHIN 1020	Beginning Chinese II	5
CHIN 2110	Second Year Chinese I	3
CHIN 2120	Second Year Chinese II	3
CHIN 3010	Advanced Intermediate Chinese	3
CHIN 3130	Special Topics in Chinese	3

French

Code	Title	Hours
FREN 1002	French Language II	4
FREN 1020	Beginning French II	5
FREN 2001	Second-Year French	3
FREN 2003	French Language III	3
FREN 2004	French Language 4: Introduction to Advanced Studies	3
FREN 2110	Intermediate French I: Grammar Review, Reading and Composition	3
FREN 3010	French Phonetics and Pronunciation	3
FREN 3020	Conversation through Film	3
FREN 3050	Advanced Grammar and Composition	3
FREN 3060	Advanced French Language Skills	3
FREN 3112	Survey of French Literature I	3
FREN 3120	French Cultural Identities: Myths and Realities	3
FREN 3122	Survey of French Literature II	3
FREN 3130	Current Topics of the French-Speaking World	3
FREN 3140	Contemporary Francophone Cultures	3
FREN 3970	Special Topics	3
FREN 4010	Advanced Composition: Stylistics	3
FREN 4050	Advanced French for Business	3
FREN 4082	Introduction to Translation	3
FREN 4200	French Civilization Through the Nineteenth Century	3
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries	3
FREN 4310	Seventeenth Century Literature	3
FREN 4360	Eighteenth Century Novel, Theater and Poetry	3
FREN 4430	Nineteenth Century French Novel	3
FREN 4480	Twentieth Century French Novel	3
FREN 4490	Twentieth Century French Theater	3
FREN 4510	French Women Writers	3
FREN 4520	Voices of Haiti and the Caribbean	3
FREN 4600	History of the French Language	3

German

Code	Title	Hours
GRMN 1020	Beginning German II	5

Latin

Code	Title	Hours
LATN 1020	Beginning Latin II	5
LATN 2010	Intermediate Latin I	3
LATN 2020	Intermediate Latin II	3

Modern Language

Code	Title	Hours
MLNG 1020	Special Topics: Beginning Language II (must be a minimum of three credit hours and the topic must be a non-English language)	

Spanish

Code	Title	Hours
SPAN 1020	Beginning Spanish II	5
SPAN 1021	Intensive Spanish	5
SPAN 2070	Spanish Medical Conversation for Beginners II	3
SPAN 2110	Second Year Spanish I	3
SPAN 2120	Second Year Spanish II	3
SPAN 3010	Spanish Composition I	3
SPAN 3020	Spanish Composition II	3
SPAN 3025	Writing for Latinos	3
SPAN 3030	Spanish Oral Proficiency	3
SPAN 3050	Advanced Spanish Grammar	3
SPAN 3060	Hispanic Phonetics: Theory and Practice	3
SPAN 3101	Introduction to the Study of Literature	3
SPAN 3199	Topics in Spanish Literature	3
SPAN 3212	Spanish American Culture and Civilization	3
SPAN 3213	Contemporary Latin American Culture and Institutions	3
SPAN 3221	Culture and Civilization of Spain I	3
SPAN 3222	Culture and Civilization of Spain II	3
SPAN 3223	Contemporary Spanish Culture and Institutions	3
SPAN 3225	Special Topics In Hispanic Culture	3
SPAN 3230	Ibero-American Cultures through Film	3
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	3
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	3
SPAN 3400	Survey of Spanish Literature I	3
SPAN 3410	Survey of Spanish Literature II	3
SPAN 3510	Survey of Spanish American Literature II	3
SPAN 3550	Spanish American Short Story	3
SPAN 3700	Spanish for International Business I	3
SPAN 3710	Spanish for International Business II	3
SPAN 3730	Special Topics in Spanish for the Professions	3
SPAN 3740	Spanish for the Healthcare Professions I	3
SPAN 3750	Spanish for the Healthcare Professions II	3
SPAN 3782	Introduction to Translation I	3

SPAN 3792	Introduction to Translation II	3
SPAN 4010	History of the Spanish Language	3
SPAN 4020	Spanish Sociolinguistics	3
SPAN 4030	The Learning and Teaching of Heritage Speakers	3
SPAN 4040	Spanish Classroom Methods and Practice	3
SPAN 4060	Dialects of the Spanish-Speaking World	3
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition	3
SPAN 4076	Spanish in Colorado	3
SPAN 4080	Spanish in the United States	3
SPAN 4099	Special Topics in Linguistics	3
SPAN 4110	Contemporary Spanish Literature	3
SPAN 4130	Medieval Spanish Literature	3
SPAN 4150	Masterpieces of Spanish Literature	3
SPAN 4170	Golden Age Drama	3
SPAN 4180	Modernism	3
SPAN 4190	Nineteenth-Century Spanish Novel	3
SPAN 4300	Generation of 1898	3
SPAN 4320	Interculturalism and Transnationalism in Modern Spain	3
SPAN 4330	Modern Culture of Spain through Film and Narrative	3
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	3
SPAN 4350	Don Quijote	3
SPAN 4360	Women and the Spanish Civil War	3
SPAN 4380	Romanticism in Spain	3
SPAN 4399	Special Topics: Spanish Peninsular Literature	3
SPAN 4401	Survey of Spanish-American Literature I: Pre-1898	3
SPAN 4411	Contemporary Spanish-American Novel	3
SPAN 4450	Masterpieces of Spanish-American Literature	3
SPAN 4501	Borges: An Introduction to His Labyrinths	3
SPAN 4512	Contemporary Argentine Short Stories	3
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial	3
SPAN 4522	Mexican Literature II: 19th to 21st Centuries	3
SPAN 4525	Orientalisms In The Hispanic Tradition	3
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema	3
SPAN 4550	Garcia Marquez: Words of Magic	3
SPAN 4590	Ibero-American Thought	3
SPAN 4599	Special Topics: Latin American Literature	3
SPAN 4600	Seminar in Spanish Creative Writing: Poetry and Short Fiction	3

Humanities

Code	Title	Hours
In addition to the CU Denver Core Curriculum requirement in Humanities, students must take a second CLAS course from the CU Denver Core Curriculum Course listing for the Humanities knowledge area or one of the following [1]		*3*

[1] Courses with an ENGL, HIST, HEHM, HUMN, PHIL, or RLST subject code may apply. ETST 2155 African American History and ETST 2357 Asian American & Pacific Islander Cultures may also apply to the CLAS Humanities requirement. RLST 3800 Spirituality and Ecology in Global Societies is approved to apply to either CLAS Humanities or CLAS Behavioral Science, but cannot apply to both areas.

Students may not use any lower-division level (1000-2000) introductory English composition course to fulfill this requirement, i.e. ENGL 1010 Writing Workshop, ENGL 1020 Core Composition I, ENGL 2030 Core Composition II.

Arabic, Chinese, French, German or Spanish culture, literature or film courses may be taught in English or in the associated language. Students may not use a language acquisition course to fulfill this requirement. The exception is FREN 2003 French Language III and FREN 2004 French Language 4: Introduction to Advanced Studies which are approved for CU Denver Core Curriculum: Humanities Knowledge Area and can apply to CLAS Humanities. Please refer to the list of approved courses for additional information.

CU Denver Core Curriculum Knowledge Area: Humanities (p. 122)

Arabic Culture/Literature/Film

Code	Title	Hours
ARAB 1000	Introduction to Cultures of the Arabic-Speaking World	3

Chinese Culture/ Literature/ Film

Code	Title	Hours
CHIN 1000	China and the Chinese	3
CHIN 1111	First Year Seminar	3
CHIN 2970	Contemporary Chinese Cinema	3
CHIN 3130	Special Topics in Chinese	3
CHIN 3200	Contemporary Chinese Society and Culture	3
CHIN 3300	Special Topics on Chinese Film	3

French Culture/ Literature/ Film

Code	Title	Hours
FREN 1000	Introduction to Cultures of the French- Speaking World	3
FREN 1111	First Year Seminar	3
FREN 3112	Survey of French Literature I	3
FREN 2003	French Language III	3
FREN 2004	French Language 4: Introduction to Advanced Studies	3
FREN 3120	French Cultural Identities: Myths and Realities	3
FREN 3122	Survey of French Literature II	3
FREN 3130	Current Topics of the French-Speaking World	3
FREN 3140	Contemporary Francophone Cultures	3
FREN 3200	The Francophone World in the Post-Colonial Era	3
FREN 3970	Special Topics	3
FREN 4200	French Civilization Through the Nineteenth Century	3
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries	3
FREN 4310	Seventeenth Century Literature	3
FREN 4360	Eighteenth Century Novel, Theater and Poetry	3
FREN 4430	Nineteenth Century French Novel	3
FREN 4480	Twentieth Century French Novel	3
FREN 4490	Twentieth Century French Theater	3

FREN 4510	French Women Writers	3
FREN 4520	Voices of Haiti and the Caribbean	3

German Culture/ Literature/ Film

Code	Title	Hours
GRMN 1000	Germany and the Germans	3
GRMN 3200	Current German Society and Culture	3

Spanish Culture/ Literature/ Film

Code	Title	Hours
SPAN 1000	Introduction to Cultures of the Spanish Speaking World	3
SPAN 1111	First Year Seminar	3
SPAN 2130	Current Topics in the Spanish-Speaking World	3
SPAN 3101	Introduction to the Study of Literature	3
SPAN 3199	Topics in Spanish Literature	3
SPAN 3212	Spanish American Culture and Civilization	3
SPAN 3213	Contemporary Latin American Culture and Institutions	3
SPAN 3221	Culture and Civilization of Spain I	3
SPAN 3222	Culture and Civilization of Spain II	3
SPAN 3223	Contemporary Spanish Culture and Institutions	3
SPAN 3225	Special Topics In Hispanic Culture	3
SPAN 3230	Ibero-American Cultures through Film	3
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	3
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	3
SPAN 3400	Survey of Spanish Literature I	3
SPAN 3410	Survey of Spanish Literature II	3
SPAN 3510	Survey of Spanish American Literature II	3
SPAN 3550	Spanish American Short Story	3
SPAN 4110	Contemporary Spanish Literature	3
SPAN 4130	Medieval Spanish Literature	3
SPAN 4150	Masterpieces of Spanish Literature	3
SPAN 4170	Golden Age Drama	3
SPAN 4180	Modernism	3
SPAN 4190	Nineteenth-Century Spanish Novel	3
SPAN 4300	Generation of 1898	3
SPAN 4320	Interculturalism and Transnationalism in Modern Spain	3
SPAN 4330	Modern Culture of Spain through Film and Narrative	3
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	3
SPAN 4350	Don Quijote	3
SPAN 4360	Women and the Spanish Civil War	3
SPAN 4380	Romanticism in Spain	3
SPAN 4399	Special Topics: Spanish Peninsular Literature	3
SPAN 4401	Survey of Spanish-American Literature I: Pre-1898	3
SPAN 4411	Contemporary Spanish-American Novel	3
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SPAN 4521	Mexican Literature I: pre-Columbian and Colonial	3
SPAN 4522	Mexican Literature II: 19th to 21st Centuries	3
SPAN 4525	Orientalisms In The Hispanic Tradition	3
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema	3
SPAN 4550	Garcia Marquez: Words of Magic	3
SPAN 4590	Ibero-American Thought	3
SPAN 4599	Special Topics: Latin American Literature	3
SPAN 4600	Seminar in Spanish Creative Writing: Poetry and Short Fiction	3

Behavioral Sciences

Code	Title	Hours
In addition to the CU Denver General Education Core Curriculum requirement in Behavioral Sciences, students must take a second CLAS course from the CU Denver General Education Core Curriculum Course listing for the Behavioral Sciences knowledge area or from one of the following [1]		*3*

[1] Courses with ANTH, COMM, or PSYC subject codes may apply. LING 2000 Foundations of Linguistics may also apply to the CLAS Behavioral Sciences requirement. ANTH 1303 Introduction to Biological Anthropology and PSYC 2220 Biological Basis of Behavior are approved to apply to either CLAS Behavioral Sciences or CLAS Natural and Physical Sciences, but cannot apply to both areas.

CU Denver Core Curriculum Knowledge Area: Behavioral Sciences (p. 122)

Social Sciences

Code	Title	Hours
In addition to the CU Denver Core Curriculum requirement in Social Sciences, students must take a second CLAS course from the CU Denver General Education Core Curriculum Course listing for the Social Sciences knowledge area or one of the following [1]		*3*

[1] Courses with ECON, ETST, GEOG, PBHL, PSCI, or SOCY subject codes may apply. ENVS 1342 Environment, Society and Sustainability, ETST 2000 Introduction to Ethnic Studies and RLST 3800 Spirituality and Ecology in Global Societies may also apply to the CLAS Social Science requirement. GEOG 1202 Introduction to Physical Geography and GEOG 3232 Weather and Climate are approved to apply to either CLAS Social Sciences and the CLAS Natural and Physical Sciences, but cannot apply to both areas.

CU Denver Core Curriculum Knowledge Area: Social Sciences (p. 122)

Natural and Physical Sciences, Mathematics

Code	Title	Hours
In addition to the CU Denver Core Curriculum requirement in Biological and Physical Sciences, students must take a second lab-based CLAS course from the CU Denver Core Curriculum Course listing for Natural and Physical Sciences, Mathematics knowledge area with a lab or a course from one of the following [1]		*3-4*

College of Liberal Arts and Sciences majors must complete at least two lab science courses.

[1] Courses with BIOL, CHEM, GEOL, MATH, or PHYS may apply as long as at least two lab sciences are completed. ANTH 1303 Introduction to Biological Anthropology and ENVS 1044 Introduction to Environmental Sciences/ENVS 1045 Introduction to Environmental Sciences Laboratory may apply to the CLAS Natural and Physical Sciences requirement as lab courses and GEOG 1202 Introduction to Physical Geography, GEOG 3232 Weather and Climate and PSYC 2220 Biological Basis of Behavior may apply as non-lab courses.

CU Denver Core Curriculum Knowledge Area: Natural and Physical Sciences, Mathematics (p. 122)

College of Liberal Arts & Sciences Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

For additional information regarding CLAS policies and procedures, please visit the CLAS Academic Policies website (https://clas.ucdenver.edu/faculty-staff/content/academic-policies/).

Academic Excellence

College Honors

A student who performs superlatively in course work in the college will be awarded a bachelor's degree accompanied by the statement "with distinction". To be eligible for graduation with distinction, a CLAS major must have earned a minimum of 45 CU Denver credit hours with standard grades (including failed pass/fail attempts) with a CLAS GPA of at#least 3.750. If the student does not qualify using that metric, the first 24 credit hours a student completed at any university, including any CU institution, will be excluded from the calculation, to see if they meet the metric with those grades removed.

Departmental Honors

Departments in the college offer programs through which students can qualify for Latin honors: cum laude, magna cum laude or summa cum laude. Determination of the level of honors is made by the department. Detailed information can be obtained from the individual departments.

Dean's List

Every semester, the College of Liberal Arts and Sciences publishes a Dean's List, honoring students who demonstrate high scholastic achievement. To be eligible for the Dean's List, students must earn a minimum 3.750 semester grade point average in all CU hours taken during the semester. In addition, students must complete, for letter grades, a minimum of 9 semester hours (6 summer) in structured CLAS courses, excluding independent study, cooperative education, and internships. Term GPAs are not rounded up; therefore, a 3.750 or higher is necessary in order to qualify for the Dean's List.

Students who qualify for the CLAS Dean's List will receive notification via email from the CLAS Advising Office (p. 117) approximately 4-6 weeks after the end of the semester.

Outstanding Undergraduate

Every Commencement (Summer/Fall and Spring) the College of Liberal Arts and Sciences recognizes up to two graduating students (one BA and one BS) by awarding them "Outstanding Undergraduate." This award is merit based. Candidates will submit a written application, including letters of recommendation. Finalists will be interviewed by members of the Academic Standards Committee.

To be eligible, students must:

1. Apply for graduation on or before census date of the term they are graduating.
2. Have a 3.80 or higher cumulative CU GPA. Cumulative GPAs are not rounded up.
3. Have a total of 60 credits or more from CU Denver at the end of the semester that they are scheduled to graduate (Fall/Summer and Spring).

Requirements

The Major

The Bachelor of Arts and Bachelor of Science majors in CLAS require a minimum of 30 credit hours of coursework in the major discipline (subject code). Interdisciplinary and individually structured (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/interdisciplinary-programs/) majors may have exceptions. Minimum GPA and allowable grades: 2.0 minimum major GPA, with all courses earning C- or higher grades. More restrictive credit hour, minimum grade and minimum GPA requirements for CLAS majors may be enforced. Students should consult catalog entries for their CLAS program to learn about program specific requirements.

The Minor

Minors require a minimum of 15 semester hours (may be interdisciplinary). A minimum of six upper division semester hours are required (may be interdisciplinary (p. 628)). Minors require a minimum of nine semester hours in residence. Minimum GPA and allowable grades: 2.0 minimum minor GPA, with all courses earning C- or higher grades. More restrictive credit hour, minimum grade and minimum GPA requirements for CLAS minors may be enforced. Students should consult catalog entries for their CLAS program to learn about program specific requirements.

The Certificate

Undergraduate certificates require a minimum of 12 semester hours (may be interdisciplinary (p. 864)). A minimum of six upper division semester hours are required. Because a certificate is a CU certification of a student's specialized knowledge in an advanced subject matter, all courses in a certificate program are expected to be taken in in residence at CU Denver. No transfer courses may be applied to CLAS certificate program requirements. Minimum GPA and allowable grades: 2.0 minimum certificate GPA, with all courses earning C- or higher grades. More restrictive credit hour, minimum grade and minimum GPA requirements for CLAS certificate may be enforced. Students should consult catalog entries for their CLAS program to learn about program specific requirements.

Upper-Division Requirements

A minimum of 45 credit hours of upper-division level (3000-level or higher) coursework must be completed. A minimum of 16 upper division

semester hours are required in the major discipline. Interdisciplinary and individually structured (p. 628) majors may have exceptions to the 16 credit minimum in the major discipline. Additional upper division level credit requirements for CLAS majors, minors and certificates may be enforced. Students should consult catalog entries for their CLAS program to learn about program specific requirements.

College Minimum Grade

Undergraduate students enrolled in CLAS major, minor or certificate programs must earn a minimum grade of C- or higher in all courses that count toward their major, minor or certificate (required and elective courses). If the major/minor/certificate program wishes to require a higher grade for certain types of courses, like discipline specific capstone experiences/ senior seminars, etc., those courses need to be taken in residence from CLAS faculty/enrolled at CU Denver. If the CLAS major/minor/certificate program requires students to take ancillary courses (courses that are not taught by the major/minor/certificate program), the program may not impose higher minimum course grades for those ancillary courses. Major/minor/certificate faculty advisors reserve the right to make substitutions to in residence requirements when appropriate.

CLAS Residence Requirements

Undergraduate CLAS majors must earn a minimum of 30 credit hours with letter grades, in residence. Courses taking using pass/fail grading will not apply to the CLAS residency requirement. In residence is defined as credit hours taken from the College of Liberal Arts and Sciences subject codes (https://clas.ucdenver.edu/), taught by CLAS faculty, while enrolled at CU Denver. Additional residence requirements for CLAS majors, minors and certificates may be enforced. Students should consult catalog entries for their CLAS program to learn about program specific requirements.

Internships

Undergraduate students may seek credit from an employment experience that contains academic content and is sponsored by a CLAS faculty member. Internships are helpful for career exploration early in a student's academic career or for job experience after developing academic content in the major.

Students must have a minimum 2.0 cumulative GPA in a minimum of 15 credit hours of CU Denver course work. A maximum of 12 credit hours of internship credit per semester and 12 credit hours overall can be applied toward the 120 credits required for graduation. There may also be limits on the number of credits permitted to take during a semester or total for a specific course ID. Undergraduate students should contact the Experiential Learning Center for details about the internship contract and faculty sponsorship requirements.

Independent Study

Independent studies are faculty-mentored, individually structured courses or research or creative projects designed and scheduled outside of the standard course grid. Independent study allows for investigations beyond the structured curriculum and classroom and exploration of content material that closely relates to faculty and student interest. However, the College of Liberal Arts and Sciences does not guarantee that credit earned through an independent study will count toward graduation requirements or be accepted as transfer credits. A maximum of 12 semester hours of independent study coursework can apply toward the 120 semester hour graduation requirement. This includes Directed Research.

The CU Denver campus requires manual registration using a Special Processing Form for students participating in independent study. This form constitutes the course syllabus agreement between faculty and student. The Special Processing Form requires

1. project title,
2. short, detailed project description, including texts and practical application of skills, and
3. explicit performance or grading criteria.

The faculty should separately negotiate a schedule of meetings and deadlines with the student. The form is reviewed and approved by a CLAS Associate Dean/Assistant Dean prior to student registration.

The College faculty developed the following requirements relating to student and faculty participation in independent study. Faculty seeking to waive or modify any of the policies below should work with the appropriate CLAS Associate Dean/Assistant Dean.

Student Requirements

- Enrollment as a CLAS student or, if enrolled in another major/minor, school/college, or institution, signed authorization on the Special Processing Form by the advisor/chair/dean of the originating school/college or institution prior to review by the CLAS associate or assistant dean.
- Graduate student status for 5840 (or higher), junior or senior status for 4840, sophomore status for 2840.
- Minimum GPA of 2.5 for undergraduates and 3.0 for graduate students.
- Submission of the Special Processing Form prior to the third week of a regular semester. After the third week, a petition to add is required. Summer and intensive sessions will have different deadlines.

Faculty Requirements

- CLAS tenured, tenure-track, Clinical Teaching Track, Senior Instructor, or Instructor rank.
- CLAS graduate faculty status for faculty sponsoring graduate independent study.
- Direct, not indirect, supervision by the designated CLAS faculty member.
- For instructor-rank faculty, approval by the department chair, though all untenured faculty should limit the number of independent studies and are advised to consult with the chair before taking them on.

Project Requirements

- CLAS discipline or directly discipline related content, though may be interdisciplinary.
- Unique or individually executed project content for each student.
- Not available as, or part of, a structured course offered during the same term.
- 3 student participation hours per week for each credit hour requested. Note: 4:1 ratio in summer.

Physical Education

A maximum of eight semester hours of Physical Education can apply toward the 120 semester hour graduation requirement.

Special Grading Options

Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022.

Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

Courses used to satisfy CLAS graduation requirements may be taken as P+/P/F or S/U, except to fulfill the Communicative Skills, Second Language Proficiency, major, minor or certificate requirements. In addition to CU Denver policies covering the P+/P/F or S/U grading option (see the Records and Registration Grading System (p. 71) page of this catalog). CLAS students must adhere to the following college P+/P/F or S/U grading policies:

1. Courses used to complete a student's major, minor and certificate may not be taken using P+/P/F or S/U grading.

2. Courses required to demonstrate proficiency may not be taken using P+/P/F or S/U grading, including the second semester of the CLAS Second Language Proficiency requirement.

3. Courses used to satisfy the CU Denver Core Curriculum (p. 122) Intellectual Competencies (English Composition and Mathematics requirements) may not be taken using P+/P/F or S/U grading.

4. Courses in the Knowledge Area section of the CU Denver Core Curriculum (p. 122) may be taken on a P+/P/F or S/U basis.

CLAS requires a minimum of 30 credit hours of courses with letter grades. No more than six hours P+/P/F or S/U are allowed in any one semester. A maximum of 16 credit hours may be taken P+/P/F or S/U and counted toward an undergraduate degree.

Second Bachelor's Degree

Students who have earned a bachelor's degree from the University of Colorado Denver or other regionally accredited institutions may earn an additional bachelor's degree through the College of Liberal Arts and Sciences provided that:

1. the major for the additional bachelor's degree is distinctly different from the major(s) of the previous degree(s);
2. all university graduation requirements are met;
3. all College of Liberal Arts and Sciences graduation requirements are met; and
4. all major requirements are met.

Note: Students who earned a previous bachelor's degree at the University of Colorado and plan on returning to earn an additional bachelor's degree must reapply for admission to the university. This rule applies to second bachelor's degrees only. Students pursuing double majors must complete requirements for both majors at the time of graduation, in order to earn a double major.

Explanation of Course Numbers

The course numbering system used at CU Denver identifies the class standing required for enrollment. Students are expected to take 1000-level courses in their freshman year, 2000-level courses in their sophomore year, 3000-level courses in their junior year and 4000-level courses in their senior year. Courses at the 5000 and 6000 level are restricted to master's-level business students, and courses at the 7000 level are restricted to PhD students.

Transfer Credit Information

College Level Examination Program (CLEP)

The use of CLEP subject examinations toward major, minor or certificate requirements is subject to evaluation by the undergraduate major, minor or certificate advisor in the department or program, when an exact equivalency has not been determined, and is treated in a similar way as Advanced Placement (AP), International Baccalaureate (IB) or transfer credit. To receive academic credit from CLEP, students must present official test results to the Denver Campus Office of Admissions. A maximum of 30 hours of CLEP credit can apply toward the 120 semester hour graduation requirement.

Additional information about AP, IB and CLEP exams can be found on the Records and Registration Transfer Credit (p. 73) page of this catalog.

Transfer Credit Level Determination

The general rule for determining transfer credit is that the level of credit awarded (lower-division or upper-division) will be determined by the level of the course at the sending institution. If the institution of origin listed the course as 1000 (or 100) or 2000 (or 200), or if the numbering system otherwise indicates lower-division credit, then it automatically will receive lower-division credit for fulfilling college requirements.

This rule will apply in all cases other than those where course- or student-specific exceptions have been made as described below. Exceptions can be made on a case-by-case basis in instances where the sending institution does not use a four-level course numbering system or otherwise indicate lower-and upper-division credit distinctions.

Academic units retain the authority to determine whether an individual transfer course (taken at either upper or lower division) will count as fulfilling an upper-division major requirement. It is possible for a lower-division transfer course to fulfill an upper-division major requirement in the major but not count toward the 45 upper-division hours required by CLAS. These decisions will be made by the appropriate department chair or undergraduate major advisor. The academic unit that owns the course prefix for the substituted course holds the authority to make these transfer determinations, even in cases where the substituted course fulfills a major requirement for a separate academic unit.

Transfer Course Evaluation Process

Transfer course evaluations are completed for a variety of student populations, including: prospective students, newly admitted students, or current students looking to take a course away from University of Colorado Denver. This is a regular practice that CLAS offers to foster the student's transition to the University and ultimately their degree progression. The evaluation of transfer courses follows the guidelines set forth by University of Colorado Denver (Transferring Undergraduate Credit policy 7006 (https://www.ucdenver.edu/docs/librariesprovider284/default-document-library/7000-student-affairs/7006---transferring-undergraduate-credit.pdf?sfvrsn=3754fdba_2)), Colorado Department of Higher Education and the Higher Learning Commission. Questions about the transfer evaluation process should be directed to clas.transfer@ucdenver.edu.

Each CLAS department/program has established the criteria they use to determine if/how a course is acceptable for transfer to the University of Colorado Denver. This includes a review of the level, scope, content, expected learning outcomes and academic rigor of the transfer course when making an evaluation decision. The decision to not awarded credit for a transfer course is based on policies set forth by the institution, State

and accreditation commission. Transfer evaluation decisions CANNOT solely be based on the type of institution or teaching modality (e.g., for-profit. online institutions or online courses).

At time of admission to the University of Colorado Denver, transfer courses can be entered onto a student's record with one of the following notations:

- **Direct Equivalency** - the transfer course has been deemed equivalent to a specific University of Colorado Denver course and will apply to the student's degree requirements in the same manner. The only exception is if the transfer course was taken a lower-division level and is equated to an upper-division course (as described in the Transfer Credit Level Determination section of this page).
- **DEPT_999AE** - AE is defined as Already Evaluated. The course has been evaluated and is acceptable for transfer to the University of Colorado Denver. However, the course was not deemed equivalent to a specific course. Students are welcome to request a re-evaluation of a transfer course that receives this evaluation by submitting the CLAS Transfer Course Evaluation Form (https://ucdenver.co1.qualtrics.com/jfe/form/SV_3VsjU5p2v5DRdJ4/). Please note a detailed syllabus from the term the course was taken is required for a re-evaluation of a transfer course with this type of evaluation already being awarded.
- **XDEN_999AE –** XDEN is the most generic transfer prefix. Coupled with _999AE, this means the transfer course was determined to be an acceptable for transfer based on CU Denver transfer policy, but the course did not align with a specific department/program/college/school.
- **DEPT_999TC** - TC is defined as Tentative Credit. The transfer course has not yet been evaluated by the University of Colorado Denver to determine if/how the course is accepted for transfer. A course ending with 999TC is not guaranteed to transfer and be awarded credit by the University of Colorado Denver until the evaluation of the course is complete. In addition, a course ending in 999TC will not apply to CLAS graduation, major or minor requirements until the evaluation is complete and the course is deemed a direct equivalent or ends in 999AE. Students are encouraged to request an evaluation of their TC courses by submitting the CLAS Transfer Course Evaluation Form (https://ucdenver.co1.qualtrics.com/jfe/form/SV_3VsjU5p2v5DRdJ4/). A syllabus is recommend for all evaluation requests, but is not required for courses taken at an institution in the United State. A syllabus is required for ALL course taken at an international institution – the syllabus should be provided in the native language and an English translation (from the term course was taken). If possible, the syllabus should include: textbook, course description/objectives, outline of topics covered, graded coursework.
- **XDEN_999TC -** XDEN is the most generic transfer prefix. Coupled with _999TC, this means the course needs to be evaluated to determine which discipline is the best match. This course could be evaluated under a specific department/program or be listed under a specific college/school, such as CLAS.

All transfer course evaluation request for courses that fall under a CLAS discipline/subject code need to be submitted by completing the CLAS Transfer Course Evaluation Form (https://ucdenver.co1.qualtrics.com/jfe/form/SV_3VsjU5p2v5DRdJ4/).

The timeline for a transfer evaluation to be completed varies depending on the type of course, the department completing the evaluation, and the time of the year the request is received. Please know that we will strive have the evaluations completed in as timely of a manner as possible, but request allowing a minimum of 15 business days for most evaluations to be completed.

Guidelines for Transfer Application

- CLAS Humanities, excludes lower division level ENGL transfer courses that mention the following topics in the title: writing (unless course description details that the course is in criticism or theory), composition, rhetoric, theory (unless literary theory), research (unless related to literature or literary studies), editing, linguistics, grammar, rhetoric (unless course description details that the course is in criticism or theory), workshop. CU Denver English faculty will review and evaluate syllabi when necessary. CLAS Humanities also excludes language acquisition courses.
- For other CLAS graduation requirement areas, transfer courses must come from one of the identified subject codes for each area. For any outliers, the course must be taken from a College of Liberal Arts and Sciences and must be submitted by completing the CLAS Transfer Course Evaluation Form (https://ucdenver.co1.qualtrics.com/jfe/form/SV_3VsjU5p2v5DRdJ4/).

Administrative Policies

Incomplete Grade

When a student has special circumstances that make it impossible to complete course assignments, faculty members may choose to award an incomplete grade. All incomplete courses are assigned a grade of Incomplete (*"I"*). Incomplete grades are *not* awarded for poor academic performance or as a way of extending assignment deadlines. A CLAS course completion agreement form (https://clas.ucdenver.edu/faculty-staff/sites/default/files/attached-files/incomplete_policy_and_form_rev._12.20.pdf) documenting assignments to be completed as well as the agreed upon due dates is required when faculty and student agree on an incomplete grade. Both parties should keep copies of this agreement and a copy should be retained in the department office or with a designated party such as the department's Director of Undergraduate Studies. **Faculty are not required to award an Incomplete.**

To be eligible for an incomplete grade, students must:

- Have participated in the class for a significant proportion of the term
- Have successfully completed a significant proportion of the course assignments
- Have special circumstances (verification may be required) that preclude the student from attending class and/or completing graded assignments
- Make arrangements to complete missing assignments with the original instructor by a mutually agreed upon date but within one calendar year. These, as well as assignments and grades completed up to the point that the incomplete is awarded, should be documented on the course completion agreement.

After the agreed upon date or maximum of a calendar year, the *"I"* reverts to an *"F"* grade on the student's transcript if the instructor fails to submit a change of record request to report the earned grade. Any request to allow a grade change after the one-year period must be petitioned to the CLAS Academic Standards Committee.

In order to be on the graduation lists, a student must resolve all incomplete grades before the last day of classes in the semester in which they intend to graduate.

Students should not re-enroll in a course in which they have an incomplete. Re-enrollment in a course in which a student has an *"I"* could result in a loss of tuition and an *"F"* grade on the student's transcript for the original course. A student with an *"I"* does not need to be enrolled in any course or earning any credits to complete the incomplete work. Completing an *"I"* does not require any additional tuition payment.

Course Repeat Policy

Students may re-register for any course. Both (all) courses remain on the transcript and both (all) grades are used to calculate the student's GPA. Course credit toward graduation is counted only once for a typical course no matter how many times the course is repeated. Some types of courses (e.g. Directed Research, Internships, Independent Studies, Special Topics, etc.) may be repeatable for applicable credit within a certain range of total credit hours. Special Topics courses may be repeatable for applicable credit within a certain range of total credits hours, as long as each topic is unique and different. See course descriptions for the max semester hours applicable from each course.

Administrative Add Policy

The College of Liberal Arts and Sciences may provide permission to a student or may add a student to a class with student and instructor permission through Census, provided the room has capacity for that student and all prerequisites have been met, or explicit exception to a prerequisite has been granted and no other circumstances are preventing the student from being eligible, i.e. course overload, time conflict or holds that prevent normal addition of a class and require additional approvals. After Census, a student must petition and obtain permission from the appropriate assistant/associate dean for this to occur, according to deadlines posted in the academic calendar.

Administrative Switch Policy

The College of Liberal Arts and Sciences may grant an administrative switch from one section of a course to another section of the same course or from one course to another course, with the approval of the appropriate assistant/associate dean, waiving the $100 drop fee, if a student has enrolled in a section of a course in error or can demonstrate circumstances beyond their control and can no longer attend the original section of the course.

Administrative Drop Policy

The College of Liberal Arts and Sciences reserves the right to administratively drop a student from a course if they have not met all system enforced prerequisites or met the attendance policies as stated in course syllabi, with the approval of the appropriate assistant/associate dean. The student will be notified that an administrative drop will occur prior to that action taking place. All administrative drops must occur prior to Census so that students do not receive a W on the transcript and are not held financially responsible for full tuition, though there may be fees incurred that students are financially responsible for paying. In the case of an administrative error, students may petition to drop a course through their CLAS advisor. If approved students will be dropped from the course, will not receive a W on the transcript and will receive a tuition refund.

Retroactive Drop/Withdrawal

In the event of circumstances that preclude a student from successfully completing a class, it is the student's responsibility to carry out drop procedures before the end of the semester. It is against normal college policy to allow a student to drop after the completion of the semester for which grades are already posted. Students who must stop attending one or more of the classes in which they are enrolled for a term, but who fail to properly drop, may be eligible for a retroactive drop or withdrawal. Courses must have occurred no more than seven years prior to the date of the retroactive drop/withdrawal petition to be eligible.

It is the responsibility of the student seeking a retroactive drop/withdrawal to submit a complete written petition. Detailed instructions can be obtained from the CLAS Academic Advising Office (https://catalog.ucdenver.edu/cu-denver/undergraduate/advising-other-student-services/advising/clas-academic-advising-office/), or the Graduate School (https://catalog.ucdenver.edu/cu-denver/graduate/graduate-school-policies-procedures/) for graduate students.

Declaring or Changing a Major or Minor

A complete list of undergraduate programs in the College of Liberal Arts and Sciences (CLAS) is available on the CLAS Departments and Programs page (p. 374).

CLAS students with a declared CLAS program intending to declare or change a CLAS major or minor should complete the CLAS Major/Minor Declaration Form available through the CLAS Advising Office in North Classroom (NC) 1030. CLAS students with a declared CLAS program may also initiate their request to declare or change a CLAS major or minor with their assigned CLAS Academic Advisor.

Degree seeking students on the Denver Campus may change colleges or schools within the university provided they are accepted by the college or school to which they wish to transfer. Intra-university transfer (IUT) forms may be obtained from the student's school or college or from the Office of the Registrar. Decisions on intra-university transfers are made by the college or school to which the student wishes to transfer. Transfer deadlines for all programs are August 1 for Fall semester, December 1 for Spring semester, and May 1 for Summer semester sessions.

CLAS also offers pre-health career tracks/courses of study for students intending to pursue a health profession. Students with a pre-health track/course of study should work with a Health Professions Advisor – located in North Classroom (NC) 3002 – to discuss pathways to their intended health career. Students with a pre-health career track/course of study intending to complete an undergraduate degree must declare a major to graduate.

CLAS Undeclared Majors should work with Success Advisors in the Center for Undergraduate Exploration & Advising (CUE&A) to create a plan to declare their intended major as early as possible in their undergraduate career. CUE&A is located in Student Commons 1113. Undeclared Majors intending to declare a CLAS major or minor must complete the CLAS Major/Minor Declaration Form available through the CLAS Advising Office in North Classroom (NC) 1030.

Anthropology

Chair: Marty Otañez
Program Assistant: Connie Turner
Office: North Classroom Building 4002
Graduate Advisor: Charles Musiba
Undergraduate Advisor: Tiffany Terneny
Telephone: 303-315-7328
Fax: 303-315-7336
Website: https://clas.ucdenver.edu/anthropology/

Overview

Undergraduate Information

Anthropology Major

Anthropology is the study of human origins and evolution, the present conditions of human life and the prospects for the future. It considers human beings as biological and social entities and seeks to explain both diversities and commonalities of peoples and cultures. For undergraduates, anthropology provides a rich overview of human life. It also introduces them to a variety of skills and practical research methods anthropologists apply in laboratory and field studies of the ecological constraints on human existence, the cultural bases of individual and organizational behavior and the problems and circumstances relating to the maintenance of today's healthy, productive human action in general.

Anthropological training provides entry to a variety of careers in archaeology, museology, education, community service, public administration, public health, international affairs and business. The specific skills it provides are useful to students of environmental design, city planning, community development, the medical and nursing professions and allied health sciences, law, public affairs and secondary education.

Click here (p. 392) to see the requirements for the major.

Departmental Honors Requirements

Students wishing to graduate with departmental honors in anthropology must have a cumulative GPA of at least 3.5, with a 3.7 minimum GPA in anthropology for *cum laude* (3.8 for *magna cum laude* and 3.9 for *summa cum laude*), as well as prepare an honors thesis of high quality. They must also take ANTH 4810 Integrating Anthropology. Interested students should inquire in the department no later than two semesters before graduation.

Anthropology Minor

Click here (p. 393) to see the requirements for a minor.

Graduate Information

Please go to the **Graduate** catalog to read about our graduate programs.

Programs

- Anthropology, BA (p. 392)
- Anthropology Minor (p. 393)

Faculty

Professors:

Christopher Beekman, PhD, Vanderbilt University
Sarah Horton, PhD, University of New Mexico
Tammy Stone, PhD, Arizona State University
David Tracer, PhD, University of Michigan

Associate Professors:

Charles Musiba, PhD, University of Chicago
Marty Otañez, PhD, University of California-Irvine

Assistant Professors:

Jamie Hodgkins, PhD, Arizona State University
Christine Sargent, PhD, University of Michigan
Anna Warrener, Washington University St. Louis

Emeritus:

John Brett, PhD, University of California, San Francisco and Berkeley

Instructors:

Tiffany Terneny, PhD, University of Texas-Austin

Adjunct Faculty and Affiliated Faculty:

Sharon Devine, PhD, University of Colorado
Jean Scandlyn, PhD, Columbia University
Caley Orr, PhD, Arizona State University

Instructional Faculty:

Nicholas Denning
Michael Kilman
Gail Krovitz
Mary Shirley
Kristen Sweet-McFarling
Greg Williams

Anthropology (ANTH)

ANTH 1000 - Anthropology: Past and Present (3 Credits)
Anthropology is the study of humankind in all of its diversity and complexity. Anthropologists have traditionally approached the study from four distinct perspectives: biological, cultural, linguistic and archaeological. This course considers how anthropologists study humankind from these four perspectives and the robust picture of humanity that emerges. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 1001 - Special Topics in Anthropology (1-4 Credits)
Designed to give students a chance to evaluate critically some practical or theoretical problem under faculty supervision and to present results of their thinking to fellow students and instructors for critical evaluation. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

ANTH 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

ANTH 1302 - Introduction to Archaeology (4 Credits)
Introduces the study of past cultures and their environments. Emphasis is on the scientific method, aspects of research design and analytical techniques used by archaeologists to determine chronology, taphonomy, source production areas, exchange networks, and human-environment interactions. Note: Three hours of lecture and a two-hour lab each week. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

ANTH 1303 - Introduction to Biological Anthropology (4 Credits)
Introduces the study of human biological evolution, both processes and outcomes, from primate ancestors to fossil hominids to contemporary human populations. Methods of obtaining and interpreting data concerning the genetic, biological and evolutionary basis of physical variation in living and skeletal populations. Note: 3 hours of lecture and a 2 hour lab each week. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring, Summer.

ANTH 2102 - Culture and the Human Experience (3 Credits)
An application of the concept of culture to several aspects of the human experience, including gender relations, emotion and personality, cognition, language, health and healing and economic behavior. In exploring these dimensions of the human experience, the course focuses on selected cultures from each of the world's major geographic areas. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring, Summer.

ANTH 2400 - Exploring Culture through Social Media (3 Credits)
Introduction to social media and analysis applied to cultural change. Focus on theories and practices of non-fiction image-making and “doing digital ethnography” to examine a range of experience and knowledge among different societies, communities, technologies, policy discourses and ourselves. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 2840 - Independent Study (1-3 Credits)
Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

ANTH 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

ANTH 3000 - Globalization, Migration and Transnationalism (3 Credits)
Examines the cultural dynamics of globalization, including: the development of special economic zones in the global south, rural to urban migration, transnational migration, the maintenance of transnational ties, and cross-border social formations. Reviews the dynamics of globalization through case studies and film. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Spring.

ANTH 3042 - Lost Worlds and Crystal Skulls (3 Credits)
This class explores the differences between science and pseudoscience specifically within the realm of anthropology. Scientific method and critical thought are employed in a way that trains students to question and recognize the difference between fact and fiction in data. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3045 - Cannabis Culture (3 Credits)
Familiarizes students with anthropological approaches to the culture of cannabis, including medicinal and recreational. Topics: history, cultural uses, legalization, cannabis capitalism, health effects, race and inequality, regulatory policies, retailing and consumption. Ethnographic research for data collection emphasized. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

ANTH 3101 - Foundations of Cultural Anthropology (3 Credits)
Covers current theories in cultural anthropology and discusses the nature of field work. Major schools of thought and actual field studies are explored with an emphasis on anthropological data gathering, analysis and writing. Prereq: ANTH 2102 with a C- or higher. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.
Typically Offered: Fall.

ANTH 3121 - Language, Culture, and Communication (3 Credits)
Definitions of language and communication and their relationship to human behavior, thought and culture. The classification of languages, linguistic universals, language acquisition, multilingualism, and nonhuman communication, with consideration of the evolutionary implications of such studies. Prereq: ANTH 2102 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.

ANTH 3142 - Cultural Diversity in the Modern World (3 Credits)
An in-depth analysis of the phenomena of culture and application of the culture concept to understanding cultural diversity in the modern world. Applies the concept of culture to several basic aspects of human social life, for example: social class and gender relations, ethnicity, racism and sexism, education, health and economic behavior. Students explore these issues in the context of case studies of particular groups and/or communities, focusing primarily on the diversity of cultural expression in contemporary U.S. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ANTH 3150 - Special Topics in Medical Anthropology (3 Credits)
Seminar series on current issues in medical anthropology. Faculty offer a range of different courses, including the political economy of drugs, health and human rights, and reproductive health. Prereq: ANTH 2102 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.

ANTH 3200 - Human Migration: Nomads, Sojourners, and Settlers (3 Credits)
Explores the relationship between human migration, voluntary and forced and social organization and culture in the modern world. Case studies include pastoralists, foragers, refugees, immigrants, sojourners and settlers and their impact on health, culture, identity, ethnicity, tradition and nationality. Cross-listed with PBHL 3200. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3202 - Anthropology of Health Care Policy (3 Credits)
Uses the tools and methods of cultural anthropology to analyze health care reform in the U.S. We examine analyses of the current health care system, debates over its reform, compare the US health care system to that of health care systems worldwide. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3301 - World Prehistory (3 Credits)
Explores of 3.5 million years of human cultural development that examines the prehistory of Africa, Asia, Europe and the Americas. Patterns and processes that underlie the earliest hominid expansion out of Africa, tool use, origins of fire, the peopling of the Americas, the development of metallurgy, the domestication of plants and animals and the rise of cities and the state are examined. Emphasis is on both regional developments and landmark projects that have helped clarify prehistory. Note: Introductory course in Archaeology (ANTH 1302) recommended. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ANTH 3315 - North American Archaeology (3 Credits)
Course provides a survey of the prehistoric and historic archaeology of the United States, Canada and Northern Mexico. Current knowledge of the subject and current debates are discussed. Prereq: ANTH 1302 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1302 with a C- or higher.

ANTH 3316 - History of Human Environmental Impacts (3 Credits)
Humans exist as active members of an ecosystem. There is increasing awareness that human actions have changed the environment and continue to do so. While ecologists, climatologists, and engineers work to address current and future environmental problems, the discipline of archaeology can provide a time depth and crosscultural breadth of perspective on how such issues have impacted human societies. This course will investigate and critically assess the claim that environmental and ecological factors have played a key role in the dissolution of once thriving civilizations. Examples will be drawn from across time and space, specifically emphasizing the archaeological record and the perspective it provides on a problem that is of critical relevance today. In this course students will: 1) Learn how humans have engaged with theirenvironments over the course of our species' evolutionary history; 2) Critically assess contemporary discussions of collapse and ecocide by contextualizing humanenvironment interactions within the frameworks of resilience, niche construction, and ecosystem engineering; 3) Use 'lessons from the past' to inform contemporary ecological debates; 4) Objectively evaluate the factual basis of various claims made about how humans affect, have affected, and likely will affect their environments; 5) Actively engage with the community to build sustainable gardens. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3320 - Southwestern Archaeology (3 Credits)
Considers the origins, characteristics, and interrelationships of the major culture areas in the American southwest, including the Anasazi, Hohokam, Mogollon, Sinagua and Northern Mexico. Note: ANTH 1302 recommended but not required. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3330 - Topics in Archaeology (3 Credits)
A flexible format for addressing specific topics in archaeology. Examples include the archaeology of the Great Plains, the Mediterranean Region, etc. Prereq: ANTH 2102 with a C- or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ANTH 2102 with a C- or higher.

ANTH 3500 - Human Osteology (4 Credits)
Provides in-depth knowledge of human osteology, including the following topics: skeletal anatomy; age, sex and stature determination; skeletal trauma/pathology; and taphonomy. Recitation component provides hands-on experience with skeletal material. Prereq: ANTH 1303 with a C- or higher. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 3512 - Human Evolution (3 Credits)
Provides an overview of the fossil and archaeological evidence for human origins. Theory and method in paleoanthropology is emphasized. The goal is to outline current knowledge of human biological evolution and the lifeways of our evolutionary relatives. Prereq: ANTH 1303 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.
Typically Offered: Fall, Spring.

ANTH 3560 - Human Variation and Adaptation (3 Credits)
This course explores the nature of modern human biological variation and adaptation. We address the evolutionary and biological theory that informs our study of contemporary human anatomy and physiology. Topics covered include, the nature vs. nurture debate, variation in skin pigmentation and the concept of "race", skeletal adaptations, adaptations to extreme environments and sexbased variation. Term offered: every other year. Prereq: ANTH 1303 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 3590 - Primate Behavior Research at the Zoo (3 Credits)
Students will review information on primates, learn about data collection models, design a behavior observation project on captive primates, collect and analyze behavior data, write and present a formal scientific paper. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3666 - Anthropology of Death (3 Credits)
The primary goal of the course is to identify and understand the range of human expression through the treatment of human remains in anthropological literature with focus on burials, mortuary practices, and associated rituals. Along with more theoretical papers, specific case studies will be used to address a variety of topics and issues, such as historic and prehistoric social organization, bio-archaeology, cannibalism, human sacrifice, mummification, the ethics of studying human remains, and the treatment of pets in prehistory. The time range that we will cover in the course will span from the Neolithic to the early 20th century, and numerous cultures from all parts of the globe will be our subject matter. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3700 - Current Topics in Anthropology (3 Credits)
This undergraduate course offers a flexible format for addressing specific topics of special interest in anthropology, such as: aging, race and prejudice, class, warfare and aggression, ethnicity, myth and folklore, language and communication, Colorado prehistory and topics in evolutionary theory. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ANTH 3910 - Cross-Cultural Field Experience (3-6 Credits)
An intensive contact with another culture through supervised travel in the U.S. or in a country other than the United States. Written reports required. Note: Class includes pre-trip orientation lectures; in-country lectures by local resource people and supervising CU-Denver faculty. Max Hours: 6 Credits.
Grading Basis: Letter Grade

ANTH 3939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4000 - Special Topics in Anthropology (1-4 Credits)
Designed to give students a chance to evaluate critically some practical or theoretical problem under faculty supervision and to present results of their thinking to fellow students and instructors for critical evaluation. Prereq: Junior standing or higher. Cross-listed with ANTH 5000. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4010 - Medical Anthropology: Global Health (3 Credits)
This course is concerned with the underlying biological and cultural determinants of health throughout the human life cycle in global and cross-cultural perspective. Note: The first of a two-course sequence in medical anthropology and global health studies; the second is ANTH 4020. Prereq: Junior standing or higher. Cross-listed with ANTH 5014. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4050 - Quantitative Methods in Anthropology (3 Credits)
Surveys the ways of deriving meaning from anthropological data by numerical means, including, but not confined to basic statistical procedures. Prereq: Junior standing or higher. Cross-listed with ANTH 5053. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4080 - Global Health Practice (3 Credits)
A travel-study course that provides students the opportunity to work on global health issues in the context of a supervised internship experience. In addition to a formal internship placement or directed research opportunity, students attend formal lectures and participate in seminars devoted to addressing those health issues most relevant to the country in which the course is being taught. Prereq: Junior standing or higher. Cross-listed with ANTH 5080 and PBHL 4080. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4090 - Psychedelic Anthropology (3 Credits)
Psychotropic drugs, both legal and illicit, are a predominant part of our everyday lives. This course examines their use and meaning within cultures of health and wellness, and the plant medicine, spiritual, social, political and economic issues that surround their production, use and misuse. Course activities focus on ethnographic research strategies and arts-based approaches to public scholarship. Prereq: Junior standing or higher. Cross-listed with ANTH 5090 and PBHL 4090. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4121 - Zooarchaeology (3 Credits)
Introduction to the theory and methods of zooarchaeology through lectures, readings, and hands-on lab work identifying and analyzing mammalian skeletal material. Students will learns what mammalian remains indicate about biological and cultural evolution of humans. Cross-listed with ANTH 5121. Prereq: ANTH 1303 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 4200 - Gender in Cross-Cultural Perspective (3 Credits)
A comparative analysis of gender-based status and social roles of women and men, with women's status and roles emphasized due to their near-universal construction as the "Other" sex. Examines in cross- and sub-cultural context the relations among women's status and their subsistence and reproductive activities; and the division of labor by sex, ideology and political economy. Prereq: Junior standing or higher. Cross-listed with ANTH 5200. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4230 - Fieldwork Methods (3 Credits)
This experiential course explores anthropological critiques, decolonizing approaches, and multi-media strategies to fieldwork methods with a focus on oral histories, visual narratives, community based participatory research, and indigenous ways of knowledge creation. At the end of the course, the student should have the cultural understanding and the methodological skills to complete a team-based fieldwork project successfully. Cross-listed with ANTH 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ANTH 4260 - Human Reproductive Ecology (3 Credits)
Considers the determinants of fertility variation within and among traditional human societies. Biocultural and ecological perspectives on pubertal timing, marriage patterns, birth seasonality, duration of birth intervals and reproductive senescence. Prereq: Junior standing or higher. Cross-listed with ANTH 5260. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4270 - Anthropology of the Body (3 Credits)
Explores how society, through culture, creates collective and individual bodies; embodied experience across the life course; and the body as an expression of social power, bodily modification and adornment. Note: ANTH 2102 or ANTH 3101 are recommended be taken before this course for undergraduate students. Cross-listed with ANTH 5270. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 4290 - Anthropology and Public Health (3 Credits)
"This course critically explores anthropological approaches to public health problems. Through a number of key issues and case studies, we examine how public health practice can be enhanced through anthropological research, theory and methodology. Prereq: Junior standing or higher. Cross-listed with ANTH 5290. Max hours: 3 Credits."
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4300 - Migrant Health (3 Credits)
This course examines health issues associated with transnational migration from an anthropological point of view. Drawing upon case studies, we examine the health of migrant communities in both host and sending nations. Prereq: Junior standing or higher. Cross-listed with ANTH 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4320 - Archaeology of Mexico and Central America (3 Credits)
Surveys the major prehistoric and protohistoric cultures and societies of that area of Mexico and Central America identified with the evolution of Meso-American civilization. Major topics include early human colonization of the Americas, the domestication of plants and animals, the emergence of regionally-based cultures and societies, trade and exchange and the evolution of urbanism and the state. Primary emphasis on such ancient cultures and societies as those of the Olmec, Zapotec, Maya, Teotihuacan, Toltec and Aztec. Prereq: Junior standing or higher. Cross-listed with ANTH 5320. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4330 - Lithic Analysis (3 Credits)
Examines the theoretical basis and methodological tools used by archaeologists in the analysis of prehistoric stone tools. Topics of discussion include the mechanics of stone fracture, typologies, use wear analysis and core reduction techniques. Prereq: Junior standing or higher. Cross-listed with ANTH 5330. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4350 - Anthropology of Globalization (3 Credits)
This course provides an overview of anthropological contributions to the study of globalization. Particular attention is devoted to: transformations in global capitalism, state and immigration policy, transnational families, health and transnationalism. Prereq: Junior standing or higher. Cross-listed with ANTH 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4380 - Archaeology of Hunters-Gatherers (3 Credits)
Explores the theory and methods used by archaeologists to investigate prehistoric hunter gatherers. Topics of concern include mobility, subsistence, procurement, and socio-political organization. Prereq: Junior standing or higher. Cross-listed with ANTH 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4390 - Laboratory Methods in Archaeology (3 Credits)
Methods and theories of archaeology are used to scrutinize the collection and interpretation of data and the relationships of archaeology to other disciplines. Core materials emphasize the critique of basic archaeological assumptions. Note: Course content varies slightly each time it is offered, in response to student needs and the availability of projects (e.g., laboratory work, urban excavation, survey and mapping). May be repeated for credit when topics change. Prereq: Junior standing or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: junior standing or higher

ANTH 4400 - Archaeology of Power and Inequality (3 Credits)
Addresses inequality and power through a long-term archaeological and theoretical perspective. Discusses explanations for the origins of power and inequality and their role in early small-scale societies and emerging complex politics. Prereq: Junior standing or higher. Cross-listed with ANTH 5400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4440 - Museums in the 21st Century (3 Credits)
This is an advanced course on natural history/anthropology museums. It will examine practical issues facing museums, and consider the complex questions that museums raise. The class includes lectures, discussions, and hands-on collection work, and exhibit/ outreach development. Cross-listed with ANTH 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ANTH 4500 - Advanced Issues in Human Evolution (3 Credits)
This flexible course offers an advanced treatment of issues in human biological evolution. Topics may emphasize morphological evolution, behavioral evolution, the environment of human evolution, non-human primate comparative information. Prereq: Junior standing or higher. Cross-listed with ANTH 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4560 - Human Ecology (3 Credits)
Studies demographic and ecological variables as they relate to human populations. Aspects of natural selection, overpopulation and environmental deterioration are considered. Prereq: Junior standing or higher. Cross-listed with ANTH 5560. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4570 - Landscape Archaeology (3 Credits)
Introduces spatial archaeology through intrasite analysis and regional studies. Methods treated include site location and quantitative spatial organization. Theoretical topics include definitions of community, ancient urbanism and the impact of subsistence and politics on relations to the landscape. Prereq: Junior standing or higher. Cross-listed with ANTH 5570. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4580 - Neanderthals and the Origin of Modern Humans (3 Credits)
Focuses on the human fossil record for the taxon Homo sapiens, including the earliest members of this group ("early" or "archaic" Homosapiens), the Neanderthals and so-called "anatomically modern" Homosapiens. The goal of the course is to survey the major issues within the area of modern human origins, and to learn about the evolutionary relationships, lifeways and behaviors of these groups. Prereq: Junior standing or higher. Cross-listed with ANTH 5580. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4590 - Primate Behavior (3 Credits)
Studies nonhuman primate behavior with emphasis on understanding social behavior, ecology and issues related to human evolution. Prereq: Junior standing or higher. Cross-listed with ANTH 5590. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4600 - Medical Anthropology (3 Credits)
Introduces students to the theories and concepts of medical anthropology, the study of human health and illness. Explores conceptions of the body, modalities of healing, the clinical encounter, and new medical technologies. Prereq: Junior standing or higher. Cross-listed with ANTH 5600. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4650 - Disability Anthropology (3 Credits)
Drawing from anthropology and interdisciplinary disability studies, this course explores disability and impairment across time and space. Course materials integrate ethnography, archives, novels, films, podcasts, and social media to develop a holistic, empirically grounded understanding of disability as part of human diversity. Prereq: Junior standing or higher. Cross-listed with ANTH 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ANTH 4800 - Special Topics in Medical Anthropology (3-9 Credits)
Seminar series on current issues in medical anthropology. Faculty offer a range of different courses, including the political economy of drugs, health and human rights, and reproductive health. Prereq: Junior standing or higher. Repeatable. Cross-listed with ANTH 5800. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4810 - Integrating Anthropology (3 Credits)
Designed to build on specialized course work in the subdisciplines of anthropology, this course emphasizes the basic concepts that integrate and unite the discipline and give it unique perspective. These are the concepts of culture, adaptation and human evolution. In the last several weeks of the course, students consider the applicability of the anthropological perspective to specific human issues. Note: Centers on the critical examination and discussion of presentations made by department faculty and graduate students. Note: this course assumes that students have completed course work equivalent to a minor in anthropology. Prereq: Junior standing or higher. Cross-listed with ANTH 5810. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ANTH 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of anthropology. Note: Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ANTH 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ANTH 4910 - Field Experience in Archaeology (3-6 Credits)
Students participate in archaeological field research and data recovery and conduct laboratory analysis of materials recovered in the field. Emphasis is placed on excavation technique and accuracy of record keeping. Prereq: Junior standing or higher. Cross-listed with ANTH 5910. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Anthropology, BA

Introduction

Please click here (p. 385) to see Anthropology department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 40 ANTH credit hours.
2. Students must complete a minimum of 24 upper division (3000-level and above) ANTH credit hours. Most upper division courses have lower division prerequisites.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 21 ANTH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Anthropology majors are advised to take MATH 2830 Introductory Statistics for their CU Denver Core Curriculum Mathematics requirement.

Code	Title	Hours
Complete all of the following required courses:		*11*
ANTH 1302	Introduction to Archaeology	
ANTH 1303	Introduction to Biological Anthropology	
ANTH 2102	Culture and the Human Experience	
Complete a minimum of nine credit hours from the following courses:		*9*
ANTH 3101	Foundations of Cultural Anthropology	
ANTH 3121	Language, Culture, and Communication	
ANTH 3301	World Prehistory	
ANTH 3512	Human Evolution	
Complete an additional 20 elective credit hours from the Anthropology Department.		*20*
Total Hours		**40**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/anthropology/undergraduate-learning-outcomes/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Anthropology Minor

Introduction

Please click here (p. 385) to see Anthropology department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus or online program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 ANTH credit hours.
2. Students must complete a minimum of nine upper division (3000-level and above) ANTH credit hours. Most upper division courses have lower division prerequisites.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine ANTH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. All upper division required courses must be taken from CU Denver faculty in order to count for specific requirements. Upper division courses from other schools will only count as electives.

Code	Title	Hours
Complete a minimum of nine credit hours from the following required courses:		*9*
ANTH 1302	Introduction to Archaeology	
ANTH 1303	Introduction to Biological Anthropology	
ANTH 2102	Culture and the Human Experience	
ANTH 3101	Foundations of Cultural Anthropology	
ANTH 3301	World Prehistory	
ANTH 3512	Human Evolution	
Complete a minimum of nine elective credit hours from the Anthropology Department.		*9*
Total Hours		**18**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/anthropology/undergraduate-learning-outcomes/).

Chemistry

Chair: Dr. Scott Reed
Office: Science Building, 3071
Telephone: 303-315-7634
Fax: 303-315-7366
Website: clas.ucdenver.edu/chemistry (http://clas.ucdenver.edu/chemistry/)

Overview

Undergraduate Information

Chemistry is the study of matter and its transformations, from the smallest scale - atoms and subatomic particles - to the macromolecules that provide structure and function to living organisms. Chemistry is often called the "central science" because it touches on other STEM disciplines including physics, biology, medicine, environmental science, geology, mathematics, materials science, technology, and many others. A degree in Chemistry or Biochemistry can prepare you for a wide range of meaningful careers discovering and applying scientific knowledge. Modern chemistry combines computer modeling and experimental observation using procedures that are much safer and more environment-friendly than in past generations. Learning chemistry also teaches you important critical thinking skills that can be valuable in any career.

For more information regarding major options, contact a Major Advisor: Dr. Marta K. Maroń (marta.maron@ucdenver.edu).

Click here (p. 409) to learn about the requirements for the Major in Chemistry.
Click here (p. 405) to learn about the requirements for the Major in Biochemistry.
Click here (p. 412) to learn about the requirements for the American Chemical Society Certified Major in Chemistry.

Biochemistry Minor

For more information contact the Biochemistry Minor Advisor: Dr. Jefferson Knight (jefferson.knight@ucdenver.edu). All biochemistry minors should contact the minor advisor no later than the semester prior to the semester of planned graduation.

Click here (p. 416) to learn about the Certificate in Biochemistry.

Chemistry Minor

For more information contact the Chemistry Minor Advisor: Dr. Priscilla Burrow (priscilla.burrow@ucdenver.edu). All Chemistry minors should contact the minor advisor the semester prior to the semester of planned graduation.

Click here (p. 418) to learn about the requirements for a Minor in Chemistry.

Certificate in Biochemistry

For more information contact the Biochemistry Certificate Advisor: Dr. Marta K. Maroń (marta.maron@ucdenver.edu). Students applying for the certificate should contact the certificate advisor once they start completing the certificate requirements, but no later than the semester before the certificate is planned to be awarded.

Click here (p. 420) to learn about the Certificate in Biochemistry.

Chemistry BS/MS Program

Click here (p. 415) to learn about our BS/MS Program. For more information contact the Graduate Advisor: Dr. Haobin Wang (haobin.wang@ucdenver.edu).

Departmental Honors

Qualified students are encouraged to participate in the Chemistry Honors Program. Three levels of honors are awarded by the CU Denver Chemistry Department.

To earn *cum laude* honors in Chemistry or in Biochemistry, a student must satisfy one of the following criteria:

1. an overall GPA of 3.2 or better and a chemistry GPA of 3.5 or better; or
2. an overall GPA of 3.2, a chemistry GPA of 3.2 or better, and six hours of CHEM 4880 Directed Research, spread over a minimum of two semesters.

To earn *magna cum laude* or *summa cum laude* honors in Chemistry or Biochemistry, a student must satisfy each of the following criteria:

1. an overall GPA of 3.2 or better,
2. a chemistry GPA of 3.5 or better;
3. six hours of CHEM 4880 Directed Research, spread over a minimum of two semesters with a GPA of 3.2 or better;
4. Presentation and approval of a thesis based on the independent study research to a faculty advisory committee. If the thesis is approved, the faculty committee can recommend graduation at either the magna cum laude (high) or summa cum laude (highest) level.

Guidelines for Thesis

The advisory committee is to include three faculty from the University, including at least one faculty member from Chemistry and at least one faculty member from outside the department. If the PI is chemistry department faculty, then the PI is the chair of the committee. If the PI is faculty in another department, the student needs to recruit a Chemistry faculty member who has familiarity with the research topic to serve as committee chair. The student should have the committee members in place during the first month of the semester in which the student plans to graduate.

The committee chairperson by agreeing to serve validates that the presented research has been performed by the student.

The thesis is written using the primary journal style of the research sub-specialty. The student gives committee members the finished thesis two weeks prior to the thesis presentation unless the student has been otherwise informed by the committee members. The student organizes the time and place of examination. The last date to schedule the oral examination of the thesis is the Friday before the last week of the regular semester. This gives the student two weeks to make corrections and changes specified by the committee. The last day to turn in a completed and signed off thesis is the Friday of finals week at 4 pm. The committee signs the Thesis Examination Form, gives a copy to departmental advisor along with a copy of the thesis.

Graduate Information

At the graduate level, an MS degree program is offered. Students with MS degrees have job opportunities in research and technical laboratory services. In addition, flexible programs can be designed to combine chemical knowledge and skills with other interests of the MS-level

student (e.g., biology or environmental science). Please go to the **Graduate** catalog to read about our graduate programs.

Programs

- Biochemistry, BS (p. 405)
- Chemistry, BS (p. 409)
- Chemistry, BS - ACS Certified (p. 412)
- Chemistry, BS/MS (p. 415)
- Biochemistry Minor (p. 416)
- Chemistry Minor (p. 418)
- Biochemistry Undergraduate Certificate (p. 420)

Faculty

Professors:

David Engelke, PhD, Washington University (St. Louis)
Doris Kimbrough, PhD, Cornell University
Hai Lin, PhD, University of Science and Technology of China
Scott Reed, PhD, University of Oregon
Haobin Wang, PhD, Wayne State University
Xiaotai Wang, PhD, University of Virginia

Associate Professors:

Jefferson Knight, PhD, Yale University
Yong Liu, PhD, University of Michigan
Xiaojun Ren, PhD, Jilin University
Marino Resendiz, PhD, University of California, Los Angeles
Liliya Vugmeyster, PhD, State University of New York at Stony Brook

Assistant Professors:

John D. (Nick) Fisk, PhD, University of Wisconsin
Emilie Guidez, PhD, Iowa State University
Jung-Jae Lee, PhD, University of Notre Dame
Woonghee Lee, PhD University of Wisconsin–Madison

Clinical Associate Professors:

Marta Maroń, PhD, University of Colorado Boulder

Clinical Assistant Professor:

Priscilla Burrow Crocker, PhD, University of Colorado Boulder

Instructors:

Vanessa Fishback, PhD, University of Northern Colorado
Kyoung Kim, PhD, University of Notre Dame

Chemistry (CHEM)

CHEM 1000 - Foundations for General Chemistry (3 Credits)
This is a lecture- only course intended for students pursuing a degree in science or a health-related field. The course is designed for students who have never had a chemistry course or who have not taken general chemistry in 5+ years. Topics include the classification of matter, the Metric system, dimensional analysis, atomic theory and the structure of atoms, periodic relationships, energy and temperature, gas laws and the kinetic molecular theory, compounds and nomenclature of inorganic compounds, the mole, stoichiometry, types of chemical reactions, balancing equations, electron configurations, and chemical bonding. Enrollment in this course is strongly encouraged prior to enrollment in Chem 2031 if the student does not have a strong and recent background in general chemistry. Note: College Algebra or the equivalent is strongly recommended for optimal student success. Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

CHEM 1115 - Chemistry Content (1-3 Credits)
Covers content areas of undergraduate chemistry. Topics include periodicity; the mole and chemical bonding; the kinetic theory and states of matter; chemical reactions; solutions and chemical equilibria. Note: Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 1474 - Core Chemistry: Chemistry for Everyday (4 Credits)
Focuses on the common household chemicals that affect us on a daily basis. Students explore current topics in chemistry and the underlying chemistry of nuclear power, plastics, sunscreens, food, acid rain, etc. Home-based laboratory experiments with safe, common substances. No co-credit: Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 1494 - Forensic Chemistry (4 Credits)
This one semester chemistry lecture and laboratory course is designed to engage a non-science major through the high-interest topic: criminal investigations. In this course, using the theme of forensic science students will be introduced to a basic understanding of chemistry, the physical and chemical properties of matter, simple types of chemical reactions and equations, and molecular structure of drugs and biomolecules. Note: Two years of high school science and one year of high school algebra are strongly recommended for optimal success. Students will not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: spring, summer. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Spring, Summer.

CHEM 1575 - Chemistry: History and Policies (4 Credits)
A study of the building blocks of all matter: chemicals. A focus on how the study of chemistry began and how it has changed over the course of history. The course explores how chemistry has impacted man from the earliest times: from the Bronze Age to the present and beyond. Students learn about the first use of manufactured chemical substances in history and the progression of chemical knowledge throughout history. Students also study how certain substances introduced into the environment throughout history have affected the environment and what policies have been put in place to control or remediate the release of these substances. Eight home#based laboratory experiments will be performed during the semester. High school algebra is strongly recommended preparation for this course. Math concepts critical for this course include basic operations#addition, subtraction, multiplication and division#, order of operations, exponents, square roots and the ability to rearrange and solve algebraic equations. Term offered: fall. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 2031 - General Chemistry I (3 Credits)
This is the first of a two semester sequence designed for students pursuing a degree in science or a health related field. Chem 2031 is designed for students who have recently completed high school chemistry or Chem 1000 with a C- or better. Note: Non- science majors should review the course description for Chem 1474 as an alternative, non-majors science CU Denver Undergraduate Core course, with lab credit. Topics covered include the classification of matter, the Metric system, dimensional analysis, atomic theory and the structure of atoms, periodic relationships, empirical formulas, thermochemistry, gas laws and the kinetic molecular theory, compounds and nomenclature of inorganic compounds, the mole, balancing equations, stoichiometry, types of chemical reactions, solution stoichiometry and dilutions, electron configurations, chemical bonding, Lewis Dot Theory, Valence Shell Electron Pair repulsion Theory, and other topics as time allows. This course is a prerequisite or co-requisite for General Chemistry 1 Lab, Chem 2038. No co-credit with CHEM 2081. Note: a beginning course for science majors, medical technologists, pre-medical and pre-dental students. It is strongly recommended that students have taken CHEM 1000 and MATH 1110 or their high school equivalents to be adequately prepared to succeed in this course. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2038 - General Chemistry Laboratory I (1 Credit)
Laboratory course designed to accompany Chem 2031. Topics include gravimetric analysis, statistical analysis, stoichiometry, Avogadro's number, thermochemistry, atomic spectroscopy, paper chromatography, and gas laws. No co-credit with CHEM 2088 and CHEM 2039. Coreq: CHEM 2031 or CHEM 2081. Term offered: fall, spring, summer. Max hours: 1 Credit. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2039 - Majors General Chemistry I Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in General Chemistry I (CHEM 2031) or the companion Majors General Chemistry I course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Majors General Chemistry I Laboratory is distinguished from the regular General Chemistry Laboratory by smaller sections, and greater access to specialized techniques, open ended experiments, instrumentation, and introduction to computational chemistry. Note: This course is intended for Chemistry and Biochemistry majors and minors. Note: No co-credit with CHEM 2038. Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry and Biochemistry majors and minors. Typically offered: fall, spring, summer. Max hours: 2 Credits.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry and Biochemistry majors and minors (BCHM-CERU, BICM-ADL, BICM-BS, BICM-MIN, CHEM-ADL, CHEM-BS, CHEM BS2, CHEM-MIN).
Typically Offered: Fall, Spring, Summer.

CHEM 2061 - General Chemistry II (3 Credits)
This is a continuation of Chem 2031 and is the second course of a two semester sequence designed for students pursuing a degree in science or a health related field. CHEM 2061 builds upon the understanding of chemistry rooted in the molecular nature of matter and change from General Chemistry I and expands to include topics such as intermolecular forces, solution chemistry, kinetics, chemical equilibrium, acid-base chemistry, buffer chemistry, solubility, thermodynamics and time permitting, electrochemistry. Specific topics include: the use of bonding theories to explain the relationships between atomic structure, molecular shape, and macroscopic properties of matter including boiling point, vapor pressure, surface tension, viscosity, and capillarity; the understanding of molecular structure to explain the energetics of solution formation as well as vapor pressures of pure liquids and solutions; the application of rates of reactions to define the state of equilibrium; the application of problem solving techniques for systems at equilibrium to acid/base and solubility chemistry; and the thermodynamic underpinnings of chemical reaction rates and the spontaneous conversion of chemical species to attain a state of dynamic equilibrium. This course is a prerequisite or co-requisite for General Chemistry II Lab, Chem 2068. Prereq: CHEM 2031 or 2081 with a C- or higher. No co-credit with CHEM 2091. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prereq: CHEM 2031 or 2081 with a C- or higher
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2068 - General Chemistry Laboratory II (2 Credits)
Laboratory course designed to accompany Chem 2061. Topics include colligative properties, spectroscopic analysis, kinetics, equilibrium, acid-base chemistry, titrations, and qualitative analysis of metal cations. No co-credit with CHEM 2098 and CHEM 2069. Prereq: CHEM 2038 or CHEM 2039 or 2088 with a C- or higher. Term offered: fall, spring, summer. Max hours: 2 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Prereq: CHEM 2038 or CHEM 2039 or CHEM 2088 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2069 - Majors General Chemistry II Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in the Majors General Chemistry II (CHEM 2061) course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Majors General Chemistry II Laboratory is distinguished from the regular General Chemistry Laboratory by greater access to specialized techniques and instrumentation, open ended experiments, and a strong emphasis on scientific writing. Students are introduced to college-level laboratory exercises at a faster pace than traditional General Chemistry laboratory coursework, such that at the end of this course, they are ready to take on more sophisticated work. Prereq: CHEM 2031, CHEM 2038, or CHEM 2039 with a C- or higher. Coreq: CHEM 2061 or CHEM 2091. Restriction: Restricted to Chemistry and Biochemistry majors and minors. No co-credit with CHEM 2068. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2038, or CHEM 2039 with a C- or higher. Coreq: CHEM 2061 or CHEM 2091. Restriction: Restricted to Chemistry and Biochemistry majors and minors (BCHM-CERU, BICM-ADL, BICM-BS, BICM-MIN, CHEM-ADL, CHEM-BS, CHEM BS2, CHEM-MIN).
Typically Offered: Fall, Spring.

CHEM 2081 - Honors General Chemistry I (3 Credits)
Topics include gas laws, thermochemistry, the quantum mechanical model of the atom, periodic properties, bonding and molecular geometry and intermolecular forces. Prepares students to take upper division chemistry courses. Honors section: Course assumes knowledge of stoichiometry and basic atomic structure. Note: Students may not receive credit for this course if they have already received credit for CHEM 2031. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Working knowledge of high school algebra and advanced high school chemistry are required. Restriction: Restricted to Chemistry Honors students (CH01). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Chemistry Honors students.
Typically Offered: Fall.

CHEM 2088 - Honors General Chemistry I Laboratory (2 Credits)
Laboratory experiments on topics covered in CHEM 2031 or CHEM 2081, gaining experience in observing, recording, and interpreting physical and chemical phenomena. Offers smaller sections and greater access to specialized techniques, open ended experiments, and instrumentation, requiring a faster pace and more sophisticated work. Note: Students may not receive credit for this course if they have already received credit for CHEM 2038. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Coreq: CHEM 2031 or CHEM 2081. No co-credit with CHEM 2038 and CHEM 2039. Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry Honors students.
Typically Offered: Fall.

CHEM 2091 - Honors General Chemistry II Lecture (3 Credits)
Continuation of CHEM 2081. Additional topics may include kinetics, equilibria and thermodynamics. Note: Students may not receive credit for this course if they have already received credit for CHEM 2061. Note: Admission into specific CU Denver program or consent of the instructor is required. Prereq: CHEM 2081 or 2031 with a C- or higher. Restriction: Restricted to Chemistry Honors students (CH01). No co-credit with CHEM 2061. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2081 or 2031 with a C- or higher Restriction: Restricted to Chemistry Honors students (CH01)
Typically Offered: Spring.

CHEM 2098 - Honors General Chemistry II Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in General Chemistry II (CHEM 2061) or the companion Honors General Chemistry II course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Honors General Chemistry II Laboratory is distinguished from the regular General Chemistry Laboratory by smaller sections, and greater access to specialized techniques, open ended experiments, and instrumentation. Students use the laboratory skills they developed in Honors General Chemistry I Laboratory to work independently with a special emphasis on recording, interpreting, and expressing data, chemical safety, the scientific literature, innovation in the laboratory, and presentation of scientific information in oral and poster formats. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Prereq: CHEM 2038 or CHEM 2088. Coreq: CHEM 2091 or CHEM 2061. Restriction: Restricted to Chemistry Honors Students. No co-credit with CHEM 2068 and CHEM 2069. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2038 or CHEM 2088 Coreq: CHEM 2091 or CHEM 2061
Restriction: Restricted to Chemistry Honors Students
Typically Offered: Spring.

CHEM 2300 - Nutritional Chemistry (3 Credits)
Introduces nutrition intended primarily for majors in nursing, physical therapy, physical education. Topics include structure and metabolism of carbohydrates, lipids and proteins, functions of vitamins and minerals and food constituents. Prereq: CHEM 1000 or CHEM 1474 or CHEM 2031 or CHEM 2081 with a C- or better. Typically offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 1000 or CHEM 1474 or CHEM 2031 or CHEM 2081 with a C- or better.
Typically Offered: Summer.

CHEM 2600 - Introductory Topics in Chemistry (1-3 Credits)
This course is designed primarily for non-chemistry majors. Students will explore a special topic related to chemistry or biochemistry. A description of topics to be covered in the current semester is maintained on the Chemistry department website. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CHEM 2840 - Independent Study: CHEM (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

CHEM 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: 15 hours of 2.75 GPA. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CHEM 3011 - Inorganic Chemistry (3 Credits)
The fundamentals of inorganic chemistry, including: atomic, molecular and crystal structures; the energetics of reactions, acid-base interactions; and the chemistry of main group and transition metal elements, including coordination and organometallic chemistry. Prereq or Coreq: CHEM 3421 or 3491 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3421 or CHEM 3491 with a C- or higher
Typically Offered: Spring.

CHEM 3018 - Inorganic Chemistry Laboratory (2 Credits)
Combines theoretical concepts with hands-on laboratory experience and introduces students to modern inorganic chemistry. Experiments cover both main group and transition metal chemistry with an emphasis on synthesis, characterization, and application of inorganic compounds. Prereq or Coreq: CHEM 3011 with a C- or higher. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3011 with a C- or higher
Typically Offered: Spring.

CHEM 3111 - Analytical Chemistry (3 Credits)
Topics include sampling, volumetric analyses, instrumental analyses and statistical treatment of data. Note: Lecture course for chemistry, biology, medical technology and environmental students. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall.

CHEM 3118 - Analytical Chemistry Laboratory (2 Credits)
CHEM 3118 provides a strong background in those chemical principles that are particularly important to analytical chemistry, such as the ability to obtain high-quality analytical data. Students gain experience with techniques of sampling and analysis, including an introduction to instrumental methods. Additionally, students develop the skills needed to solve analytical problems in a quantitative manner, with the aid of spreadsheet tools. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Note: Laboratory course to be taken concurrently with CHEM 3111. Prereq: CHEM 2068 or CHEM 2098 with a C- or higher. Coreq: CHEM 3111 or CHEM 3481. Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2068 or CHEM 2098 with a C- or higher. Coreq: CHEM 3111 or CHEM 3481.
Typically Offered: Fall.

CHEM 3411 - Organic Chemistry I (4 Credits)
Lecture course for science majors. Topics covered include Structure and Bonding, Stereochemistry, Alkanes, reactions of alkenes, alkyl halides, alcohols and other functional groups, reaction mechanism and spectroscopy. Prereq: CHEM 2061 or 2091 with a C- or higher. No co-credit with CHEM 3481. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall, Spring, Summer.

CHEM 3418 - Organic Chemistry Lab I (1 Credit)
Laboratory course for science majors. Topics include methods of purification, separation and analysis of organic compounds; organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: CHEM 2068 or 2098 with a C-or higher. Coreq: CHEM 3411 or CHEM 3481. No co-credit with CHEM 3488. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 2068 or 2098 with a C- or higher Coreq: CHEM 3411 or CHEM 3481
Typically Offered: Fall, Spring, Summer.

CHEM 3421 - Organic Chemistry II (4 Credits)
Lecture course for science majors. A continuation of Chem 3411. Topics covered include spectroscopy, aromaticity, reactions of alkynes, conjugated dienes, benzene, benzene derivatives, aldehydes, ketone, carboxylic acids, carboxylic acid derivatives, enols, enolates and amines, reaction mechanisms and syntheses. Prereq: CHEM 3411 or 3481 with a C- or higher. No co-credit with CHEM 3491. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or 3481 with a C- or higher.

CHEM 3428 - Organic Chemistry Lab II (1 Credit)
Laboratory course for science majors. A continuation of CHEM 3418. Topics include analysis of organic unknowns, organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: CHEM 3418 or 3488 with a C- or higher. Coreq: CHEM 3421 or CHEM 3491. Note: Students will not receive credit for CHEM 3428 if they take it after successfully completing CHEM 3498. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 3418 or 3488 with a C- or higher Coreq: CHEM 3421 or 3491
Typically Offered: Fall, Spring, Summer.

CHEM 3481 - Majors Organic Chemistry I (4 Credits)
Lecture course designed for chemistry majors and students interested in other science majors, or the biomedical field, e.g., pre-dental, pre-pharmacy, or premedical; although all interested students are welcome to enroll. Organic chemistry for majors distinguishes from the regular Organic Chemistry course by a lower student-to-faculty ratio. This allows for the implementation of activities that provide a more in-depth view into this fascinating topic; as well as a better outlook into its relationship to everyday life and career opportunities. Activities may include writing and oral presentation exercises, or attending special seminars, among others. The topics covered are those in a general curriculum, such as structure and bonding, molecular representations, reactivity and mechanisms, acid/base reactions, and alkane/alkene/alkyne reactivity, to mention a few. No co-credit with CHEM 3411. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2061 or 2091 with a C- or higher or instructor permission. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2061 or 2091 with a C- or higher or instructor permission.
Typically Offered: Fall.

CHEM 3488 - Majors Organic Chemistry Laboratory I (1 Credit)
Laboratory course for science majors. Honors laboratory class to accompany CHEM 3411 or CHEM 3481. Topics include methods of purification, separation and analysis of organic compounds through extended experiments; organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2068 or 2069 or 2098 with a C- or higher and co-enroll in CHEM 3481 or instructor permission. Note: No co-credit with CHEM 3418. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS, ACS, BICM-BS, BICM-ADL) who have completed CHEM 2068 or 2069 or 2098 with a C- or higher and co-enroll in CHEM 3481 or instructor permission.
Typically Offered: Fall.

CHEM 3491 - Majors Organic Chemistry II (4 Credits)
Lecture course for science majors, a continuation of CHEM 3481. Majors Organic Chemistry is distinguished from the regular CHEM 3421 by smaller sections size and greater integration with the majors Chemistry and Biochemistry curriculum. Topics are covered with increased depth and organic chemistry topics are presented to highlight and reinforce overlapping idea from physical and biochemistry classes. Presentation is focused on reaction mechanisms, syntheses and introduction to the organic chemistry of metabolism. Intended for chemistry majors and advanced pre-medical, predental, pre-pharmacy and other health related careers requiring a full year of organic chemistry. Instructor permission required. No co-credit with CHEM 3421. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 with a C- or higher or instructor permission. Term offered: spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 with a C- or higher or instructor permission.
Typically Offered: Spring.

CHEM 3498 - Majors Organic Chemistry Laboratory II (2 Credits)
Laboratory course for science majors. A continuation of CHEM 3418 or CHEM 3488. Topics include multi-step organic reactions, workups and spectroscopy and an independent research project. Emphasis on use of the chemical literature, scientific writing and scientific presentation. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS-ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 and CHEM 3488 or 3418 with a C- or higher or instructor permission. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS, ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 and CHEM 3488 or 3418 with a C- or higher or instructor permission.
Typically Offered: Fall, Spring.

CHEM 3810 - Biochemistry (4 Credits)
Introduces the principles of biochemistry for science and health science-oriented majors. This survey course covers the important aspects of modern biochemistry including macromolecular structure, enzymology, and metabolism in one semester. Prereq: BIOL 2010(2061) or 2030(2097) and CHEM 3411 or 3481 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010(2061) or 2030(2097) and CHEM 3411 or 3481 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

CHEM 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

CHEM 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have a junior standing and at least a 2.75 GPA and must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

CHEM 4010 - Advanced Inorganic Chemistry (3 Credits)
Covers the fundamental principles of inorganic chemistry. Topics include atomic structure and periodicity, molecular symmetry, bonding, structural chemistry, main-group chemistry, coordination chemistry, and organometallic chemistry. Requisite knowledge in Undergraduate Inorganic and Physical Chemistry assumed. Cross-listed with CHEM 5010. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4110 - Advanced Analytical Chemistry (3 Credits)
Explores the fundamental principles of analytical chemistry. Topics will focus on meteorology (the science of making measurements), measurements based on energy transfer (e.g. spectroscopic analysis), and measurements based on mass transfer (e.g. chemical separations and electrochemistry). Requisite knowledge in Undergraduate Instrumental Analysis is assumed. Cross-listed with CHEM 5110. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4121 - Instrumental Analysis (3 Credits)
Surveys instrumental methods of analysis, emphasizing atomic and molecular spectroscopy, mass spectrometry, surface characterization, and chromatography techniques. Students are introduced to a wide array of powerful and elegant tools for obtaining qualitative and quantitative information about the composition and structure of matter. Prereq: CHEM 3111 or CHEM 3481, CHEM 3421 or CHEM 3491, PHYS 2331 or PHYS 2020 and CHEM 4521 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3111 or CHEM 3481, CHEM 3421 or CHEM 3491, PHYS 2331 or PHYS 2020 and CHEM 4521 with a C- or higher.
Typically Offered: Spring.

CHEM 4128 - Instrumental Analysis Laboratory (2 Credits)
CHEM 4128 demonstrates a wide array of powerful and elegant tools for obtaining qualitative and quantitative information about the composition and structure of matter. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Note: Required of chemistry majors and open to other students in CHEM 4121. Prereq: CHEM 3118 and 4538 with a C- or higher. Coreq: CHEM 4121. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq:CHEM 3118 and 4538 with a C- or higher Coreq: CHEM 4121
Typically Offered: Spring.

CHEM 4221 - Practical Applications of Spectroscopy (3 Credits)
This course surveys spectroscopic methods in order to deduce the structure of organic compounds from an examination of spectra, with an emphasis on infrared spectroscopy, mass spectometry, nuclear magnetic resonance spectroscopy, and ultraviolet spectroscopy. Students will be introduced to a wide array of powerful and elegant tools for obtaining qualitative information about the structure of matter. This course will require a good amount of thought, yet all of the concepts and associated mathematical manipulations are within the reach of a student who has met the prerequisites. Prereq: CHEM 3411 or CHEM 3481 with a C- or higher. Cross-listed with CHEM 5221. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or 3481 with a C- or higher.

CHEM 4310 - Advanced Organic Chemistry (3 Credits)
An exploration of structure, bonding and reactivity in organic modules that includes extensive analysis of the chemical literature, culminating in written and seminar presentations of individual projects. Requisite knowledge in Undergraduate Organic Chemistry and Physical Chemistry is assumed. Restriction: Restricted to degree-granting Graduate programs. Cross-listed with CHEM 5310. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 4388 - Nucleic Acid Technologies I (2 Credits)
This laboratory is intended to provide hands-on experience on the synthesis, characterization, and analyses of oligonucleotides of DNA and RNA. The laboratory will cover the basics to understand structural aspects of these biopolymers, using UV-vis, circular dichroism, electrophoresis, HPLC and mass spectroscopy. (All students will be expected to prepare, and turn in, three written reports; and three oral presentations. Every class member will also be required to keep an organized laboratory notebook, thus the class will be exposed to basic research aspects and literature searches. The course will also require students to design a successful experiment, that will prepare them for conditions they may likely encounter in an industrial, ,or advanced academic setting. Specifically, each student will choose a DNA sequence and probe their oligonucleotide model towards the recognition of a particular target, e.g., metabolite, protein, or molecular ion. In assessing these concepts, every student will be exposed to the basics of DNA/RNA structure as well as the chemistry of solid-phase chemistry. Every student will be required to present current topics (from recent literature) in front of the class as a way to enhance skills in oral presentation and scientific communication, aspects that will also enrich the scientific writing experience. To enhance the writing experience and provide a broader perspective on contemporary research, that is related to the course, students will be required to attend two seminars (from the departmental seminar series) and prepare a short written report. It is worth noting that this course will provide exposure to techniques that are commonly used in an industrial setting, e.g., in the development of RNA-based drugs and therapeutics, thus preparing them for a successful transition onto their next academic/professional step). Prereq: CHEM 3411 and CHEM 3421. Cross-listed with CHEM 5388. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 and CHEM 3421.

CHEM 4411 - Bioconjugate techniques and Theranostic Nanomedicine (3 Credits)
The selective making of chemical bonds to biological molecules in complex mixtures enables a wide variety of applications in bio- and nano-materials science, bioengineering, and diagnostic and therapeutic (nano-)medicine. This course will discuss theory and practical current methods for chemical modification and conjugation of proteins and other bio- and nano-materials: Topics include permanent and cleavable cross-linkers, protein modification reagents, immobilization of enzymes/DNA, enzyme-antibody conjugates, protein-protein interactions, PEGylation and labeling of proteins, and solid-phase peptide synthesis. Prereq: CHEM 3411 with a B- or higher. Cross-listed with CHEM 5411. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 with a B- or higher.
Typically Offered: Fall.

CHEM 4421 - Cannabis Chemistry (3 Credits)
An exploration of the terpene to cannabinoid compounds including biosynthesis pathways; human receptor structures and mechanism; current analytical methods for Quality Assurance and Quality Contorl and current research in medical applications. Prereq: Organic Chemistry I with a C- or higher (Chem 3411 or Chem 3481), and corequisite/prerequisite: Organic Chemistry II (CHEM 3421 or CHEM 3491). Cross-listed with CHEM 5421. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Organic Chemistry I with a C- or higher (Chem 3411 or Chem 3481), and corequisite/prerequisite:Organic Chemistry II (CHEM 3421 or CHEM 3491).
Typically Offered: Spring.

CHEM 4500 - Foundations of Physical Chemistry (3 Credits)
This course prepares students for CHEM 4511 and/or 4521. The goal is to bridge the gap between algebra- and calculus-based physics courses and to introduce essential math concepts and skills in Calculus III that are relevant to the Physical Chemistry course sequence 4511/4521. Prereq: PHYS 2020 or (prereq or coreq) PHYS 2331,CHEM 3421 or CHEM 3491 and MATH 2411 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: PHYS 2020 or (prereq or coreq) PHYS 2331,CHEM 3421 or CHEM 3491 and MATH 2411 with a C- or higher.
Typically Offered: Fall, Spring.

CHEM 4510 - Computational Chemistry (3 Credits)
Classical and ab initio molecular dynamics are covered from theory to application. Students have access to high-performance computational resources and cover current topics in the field. Requisite knowledge in Undergraduate Physical Chemistry is assumed. Cross-listed with CHEM 5510. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 4511 - Physical Chemistry: Thermodynamics and Kinetics (3 Credits)
Includes study of the laws of thermodynamics, thermochemistry, chemical equilibria, solutions and statistical mechanics. Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 Calculus III -OR- CHEM 4500 Foundations for Physical Chemistry with a C- or higher) OR co-requisite/ pre-requisite MATH 3511 Mathematics of Chemistry with a C- or higher if completed before CHEM 4511. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 -OR- CHEM 4500 with a C- or higher) OR co-requisite/pre-requisite MATH 3511 with a C- or higher.
Typically Offered: Fall.

CHEM 4518 - Physical Chemistry Laboratory: Reaction Analysis (2 Credits)
Instruction in the experimental techniques of physical chemistry with emphasis on the properties of gases, thermodynamics and chemical equilibrium. Prereq or Coreq: CHEM 4511 with a C- or higher if completed before CHEM 4518. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Pre- or Co-Requisite CHEM 4511 with a C- or higher if completed before CHEM 4518.
Typically Offered: Spring.

CHEM 4521 - Physical Chemistry: Quantum and Spectroscopy (3 Credits)
Continuation of CHEM 4511, with emphasis on chemical kinetics, quantum mechanics, molecular structure and spectroscopy. Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 Calculus III -OR- CHEM 4500 Foundations for Physical Chemistry with a C- or higher) OR co-requisite/ pre-requisite MATH 3511 Mathematics of Chemistry with a C- or higher if completed before CHEM 4521. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 -OR- CHEM 4500 with a C- or higher) OR co-requisite/pre-requisite MATH 3511 with a C- or higher.
Typically Offered: Spring.

CHEM 4530 - Advanced Physical Chemistry (3 Credits)
Explores fundamental properties of molecules (bond length and strength, the potential energy surface, reaction rates, etc.) and examines how these properties are measured, using original literature as the primary source, and culminating in written and seminar presentations of individual projects. Requisite knowledge in Undergraduate Physical Chemistry is assumed. Cross-listed with CHEM 5530. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4538 - Physical Chemistry Laboratory: Molecular Structure (2 Credits)
CHEM 4538 explores the central principles of physical chemistry, with emphasis on quantum chemistry, spectroscopy, and computational methods. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher if completed before CHEM 4538 . Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Pre or Co-Requisite CHEM 4511 or CHEM 4521 with a C- or higher.
Typically Offered: Fall.

CHEM 4548 - Physical Biochemistry Laboratory (2 Credits)
Experimental techniques of physical chemistry emphasizing thermodynamics, kinetics, and spectroscopy of biological molecules. Fulfills the Physical Chemistry Lab requirement for Biochemistry Emphasis majors. Prereq: CHEM 3498 or CHEM 4828 and PHYS 2020 or PHYS 2331 with a C- or higher. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher. Recommended Preparation: CHEM 4810. Cross-listed with CHEM 5548. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3498 or CHEM 4828 and PHYS 2020 or PHYS 2331 with a C- or higher. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher.
Typically Offered: Fall, Spring.

CHEM 4580 - Molecular Informatics (2 Credits)
This course resides at the intersection between Chemistry, Biochemistry, and Data Science. The course covers fundamental concepts of Chemical and Biochemical Informatics and provides students with hands on experience in using computational tools to manipulate chemical and biochemical data. Students will learn fundamentals of data science, database management, data structure, data representation, data visualization, and data analysis as applied to Chemistry and Biochemistry. The course requires a basic understanding of programming but does not require extensive programming experience. Examples explored in class and in homework will be built using Python code within Jupyter Notebooks or Google Colab notebooks such that students can explore new topics while remaining focused on the underlying molecular concepts and computer methods which allow them to manage large amounts of molecular information and to find relationships between the structure and properties of molecules. Data mining approaches will be explored as will classification algorithms and chemical similarity analysis methods. Students will learn about the applications of cheminformatics in drug discovery, such as compound selection, virtual library generation, virtual high throughput screening which can check for potential molecules that have the potential to be developed into drugs. Note: While this course is not a pre-requisite for 4510 Computational Chemistry, CHEM 4640 AI in Chemistry and Biochemistry, or CHEM 4845 Molecular Modeling and Drug Design, the skills developed in this course will work synergistically with those courses and will allow you to get more from your experiences in those courses or from your experience in a research lab. Prereq: CHEM 2031, CHEM 2061, CHEM 3411, and CHEM 4630 or MATH 1376 or BIOS 6642 or MOLB 7900 or CSCI 1410 with a C- or higher. Cross-listed with CHEM 5580. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2061, CHEM 3411, and CHEM 4630 or MATH 1376 or BIOS 6642 or MOLB 7900 or CSCI 1410 with a C- or higher.

CHEM 4600 - Advanced Topics in Chemistry (1-3 Credits)
Upper-level majors in chemistry or a related discipline explore a special topic in chemistry or biochemistry. A description of topics to be covered in the current semester is maintained on the Chemistry department website. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CHEM 4610 - Understanding & Presenting Chemical Research (1-2 Credits)
This course will improve your ability to systematically search for chemical information, help you interpret the information you find, & improve your ability to summarize and present that information. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Cross-listed with CHEM 5610. Term offered: fall, spring. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall, Spring.

CHEM 4630 - Programming for Data Analysis in the Physical Sciences (1 Credit)
This course will be taught using live coding format (the instructor will code live in the classroom with the students). In this course, you will learn to process data using python scripts that you will write. Data include for example absorption spectra, protein pdb files, coordinate files. You will also learn how to use Python libraries and write functions (for example to create high resolution graphs). Finally, you will learn best coding practices, how to keep track of different versions of your code and share your code using Github. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Having completed a semester of Organic Chemestry is recommended preparation for optimal student success. Cross-listed with CHEM 5630. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher

CHEM 4640 - Artificial Intelligence in Chemistry and Biochemistry (3 Credits)
Artificial Intelligence (AI) changes every aspect of our lives. In this course, we explore AI and its applications from the perspective of a chemist/biochemist. The role of AI and the latest trends in modern chemistry and biochemistry will be taught. Students will learn how to connect modern AI techniques to their own research projects, using both experimental and computational data. Prereq: CHEM 2031, CHEM 2061 and CHEM 3411 with a C- or higher. Pre/Coreq: CHEM 3810/4810/5810 and CHEM 4630/5630. Cross-listed with CHEM 5640. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2061 and CHEM 3411 with a C- or higher. Pre/Coreq: CHEM 3810/4810/5810 and CHEM 4630/5630.

CHEM 4655 - Teaching Assistant Bootcamp (1 Credit)
This course is 4-5 8-hour days of intensive training in suitable pedagogy for general chemistry and organic chemistry laboratory classes, procedures for teaching laboratory sections, and laboratory techniques. Students must have a teaching assistant contract with the Chemistry Department in order to take this course. Cross-listed with CHEM 5655. Term offered: fall. Repeatable. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Typically Offered: Fall.

CHEM 4700 - Environmental Chemistry (3 Credits)
A discussion of the sources, reactions, transport, effects, and fates of chemical species in the water, soil, and air environments. Prereq: CHEM 3111 or CHEM 3411 or CHEM 3481 with a C- or higher. Cross-listed with CHEM 5700. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3111 or CHEM 3411 or CHEM 3481 with a C- or higher
Typically Offered: Spring.

CHEM 4810 - General Biochemistry I (3 Credits)
In-depth introductory course for chemistry, science and health science majors. Topics include structure and energetics of proteins; mechanisms and kinetics of enzymes; structure and function of carbohydrates, lipids and nucleic acids. Prereq or Coreq: CHEM 3421 or CHEM 3491 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3421 or CHEM 3491 with a grade of C- or higher.

CHEM 4815 - Structural Biology of Neurodegenerative Diseases (3 Credits)
Advanced course in Biochemistry/Biophysics. Principles of Protein Folding, Structure-Function Relationship, and spectroscopic techniques related to characterization of these processes as applied to neurodegenerative diseases such as Parkinson's and Alzheimer's. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5815, BIOL 4815, and BIOL 5815. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Spring.

CHEM 4820 - General Biochemistry II (3 Credits)
Advanced course for chemistry, science and health science majors. Topics include energetics and pathways for metabolism of carbohydrates, lipids, and amino acids. Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4825 - Biochemistry of Metabolic Disease (3 Credits)
Advanced course in biochemistry. An expanded study of selected topics in metabolism and how they relate to diseases, including inflammation, diabetes, obesity, and rare genetic disorders. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5825, BIOL 4825 and BIOL 5825. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Fall.

CHEM 4828 - Biochemistry Lab (2 Credits)
Focuses on modern laboratory techniques for biochemical research, with an emphasis on methods for protein isolation, purification and characterization. Students perform experiments including chromatography, electrophoresis, molecular cloning, spectrophotometry, and enzyme activity assays. Prereq: CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4835 - Biochemistry of Gene Regulation and Cancer (3 Credits)
Explores the biochemical and molecular aspects of cancer biology. Topics include DNA mutations and repair, gene regulation, oncogenes and tumor suppressors, stem cells and differentiation, and cancer drug development. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5835, BIOL 4835, and BIOL 5835. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Fall.

CHEM 4840 - Independent Study: Chem (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

CHEM 4845 - Molecular Modeling and Drug Design (3 Credits)
Advanced course in biochemistry. An introductory course on modern molecular modeling techniques and their applications to computer-aided rational drug design. Prereq: CHEM 3411 or CHEM 3481 with a C- or higher and either PHYS 2020 or PHYS 2331 with a C- or higher. Cross-listed with CHEM 5845. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or CHEM 3481 with a C- or higher and either PHYS 2020 or PHYS 2331 with a C- or higher.
Typically Offered: Fall.

CHEM 4860 - Bioinorganic Chemistry: Bioinorganic compounds in medicine (3 Credits)
Explore the roles of metals in biochemistry and medicine by studying chemical/physical properties of metal coordinated compounds. The course focus on metal coordination resulting biopolymer folding and the function of macromolecules that is involved into iron cytochromes, zinc and copper enzymes, iron sulfur proteins, oxygen transport, iron storage, electron transfer, inorganic model compounds, metals in medicine, and toxicity of inorganic species. Topic is extended to biomedical application such as chemotherapy. Prereq: CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Cross-listed with CHEM 5860. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Biochemistry, BS

Introduction

Please click here (p. 394) to see Chemistry department information.

Biochemistry is the chemistry of life - the molecules, reactions, and energy transformations that underlie structure and function in all living organisms. The study of biochemistry combines knowledge from chemistry, biology, physics, and mathematics (and sometimes other disciplines) to understand how life works at the molecular level. This integrated scientific knowledge will be essential for understanding the future of human health, sustainable energy, and the environment.

The BS Biochemistry program at CU Denver strongly emphasizes connections between basic science and human health. Required coursework covers much of the foundational knowledge and skills for graduate and health professions entrance exams. Several courses explore connections between cutting-edge biochemical research and different diseases. Students are encouraged to take advantage of undergraduate research opportunities in biochemistry and related fields either at CU-Denver or on the nearby Anschutz Medical campus. Graduates learn skills in critical thinking, problem solving, and scientific communication for careers in the health and natural sciences.

A BS in Biochemistry stands out as a premiere accomplishment in applications for professional degree programs, including pharmacy, medicine, nursing, dentistry, medical technology, and many others.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Qualified majors are strongly urged to participate in directed research and departmental honors programs. We also strongly encourage Biochemistry majors to participate in the Chemistry department by serving as learning assistants or teaching assistants.

Students interested in the Biochemistry major or a double Chemistry and Biochemistry major should consult regularly with a Biochemistry Major Advisor: Dr. Marta K. Maroń marta.maron@ucdenver.edu.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 74 credit hours, including a minimum of 33 CHEM credit hours.
2. Students must complete a minimum of 16 upper-division (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 14 credits hours with CU Denver faculty including CHEM 4518 Physical Chemistry Laboratory: Reaction Analysis or CHEM 4538 Physical Chemistry Laboratory: Molecular Structure or CHEM 4548 Physical Biochemistry Laboratory.

Program Restrictions, Allowances and Recommendations

1. A student who has declared a Biochemistry major at CU Denver may not take additional chemistry courses outside of the department for the purpose of applying those credits toward meeting the requirements of the major without prior written approval of the undergraduate Biochemistry advisor. No more than 3 additional hours of such pre-approved transfer credits will be allowed.
2. All courses applied to the Biochemistry major need to be taken within ten years of the graduation date with the exception General Chemistry I and II Lecture and Lab: CHEM 2031 General Chemistry I, CHEM 2081 Honors General Chemistry I, CHEM 2038 General Chemistry Laboratory I, CHEM 2039 Majors General Chemistry I Laboratory, CHEM 2088 Honors General Chemistry I Laboratory, CHEM 2061 General Chemistry

II, CHEM 2091 Honors General Chemistry II Lecture, CHEM 2068 General Chemistry Laboratory II, CHEM 2069 Majors General Chemistry II Laboratory and CHEM 2098 Honors General Chemistry II Laboratory. In the event that the student would like to apply for expired credit for CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.

3. PHYS 2321 Intro Experimental Phys Lab I and PHYS 2341 Intro Experimental Phys Lab II are specifically designed for students in non-Physics majors and can be paired with either PHYS 2010 College Physics I and PHYS 2020 College Physics II or PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based lectures. Students pursuing a second major in Physics should complete PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based and PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II.
4. Students may double major in Biochemistry and Chemistry. Students can apply the requirements for both majors, if the respective courses are a major requirement for both the Chemistry and Biochemistry major. A course cannot fulfill more than two requirement/elective areas in a student's degree.

Code	Title	Hours
Complete the following program requirements		
Complete all of the following required CHEM courses:		*33*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3481	Majors Organic Chemistry I	
CHEM 3488	Majors Organic Chemistry Laboratory I	
CHEM 3491	Majors Organic Chemistry II	
CHEM 3498	Majors Organic Chemistry Laboratory II	
CHEM 4500	Foundations of Physical Chemistry [1]	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
or CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4548	Physical Biochemistry Laboratory	
or CHEM 4538	Physical Chemistry Laboratory: Molecular Structure	
or CHEM 4518	Physical Chemistry Laboratory: Reaction Analysis	
CHEM 4810	General Biochemistry I	
or CHEM 5810	Graduate Biochemistry I	
CHEM 4828	Biochemistry Lab	
Complete nine credits from three of the following advanced biochemistry courses:		*9*
BIOL 4125	Molecular Biology Laboratory	
BIOL 4225	Genomics and Bioinformatics	
CHEM 4411	Bioconjugate techniques and Theranostic Nanomedicine	
CHEM 4600	Advanced Topics in Chemistry [3]	
CHEM/BIOL 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4820	General Biochemistry II	
CHEM/BIOL 4825	Biochemistry of Metabolic Disease	
CHEM/BIOL 4835	Biochemistry of Gene Regulation and Cancer	
CHEM 4845	Molecular Modeling and Drug Design	
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine	
CHEM 4880	Directed Research [2]	
CHEM 5830	Graduate Biochemistry II	
Complete six credits from the following molecular science elective courses, not already completed:		*6*
BIOL 3124	Introduction to Molecular Biology	

BIOL 3225	Human Physiology	
BIOL 3611	General Cell Biology	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 3763	Biostatistics	
BIOL 3804	Developmental Biology	
BIOL 3832	General Genetics	
BIOL 4024	Introduction to Biotechnology	
BIOL 4064	Cell Biology of Disease	
BIOL 4165	Neurobiology	
BIOL 4550	Cell Signaling	
CHEM 4121	Instrumental Analysis	
CHEM 4421/5421	Cannabis Chemistry	
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4630 & CHEM 4580	Programming for Data Analysis in the Physical Sciences and Molecular Informatics [4]	
CHEM 4640	Artificial Intelligence in Chemistry and Biochemistry	
CHEM 4700	Environmental Chemistry	
CHEM 4880	Directed Research	
MATH 3511	Mathematics of Chemistry	
PHYS 3452	Biophysics of the Cell NM	
PSYC 3832	Neural Basis of Learning	
Complete ancillary coursework.		*26*
Biology (p. 407)		
Mathematics (p. 407)		
Physics (p. 408)		
Total Hours		**74**

1 Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry in place of CHEM 4500 Foundations of Physical Chemistry.

2 For faculty-mentored research projects related to biochemistry. Major credit for this course requires prior approval from the Biochemistry majors advisor and the research mentor. Major credits do not count toward departmental Honors requirements.

3 Certain topics, with permission from the Biochemistry Advisor.

4 These two together fulfill one Molecular Science Elective requirement.

Biology

Code	Title	Hours
Complete the following:		*8*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	

Mathematics

Code	Title	Hours
Complete the following:		*8*
MATH 1401	Calculus I	
MATH 2411	Calculus II	

Physics

Code	Title	Hours
Complete one of the following sequences. Refer to note 3 under Program Restrictions, Allowances and Recommendations for alternative Physics lab information:		*10*
Sequence A [1]		
PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
Sequence B		
PHYS 2010	College Physics I	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2020	College Physics II	
PHYS 2341	Intro Experimental Phys Lab II	

[1] Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry in place of CHEM 4500 Foundations of Physical Chemistry.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/undergraduate-students/bs-biochemistry/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Chemistry, BS

Introduction

Please click here (p. 394) to see Chemistry Department information.

A Chemistry degree can prepare you for a meaningful career in:

- Developing renewable energy solutions for climate change
- Ensuring safe and pure air and drinking water
- Discovering materials for new devices using nanotechnology
- Analyzing medical samples to detect rare and dangerous diseases
- Contributing to Colorado's and America's mining and petroleum industries
- Contributing to Colorado's emerging natural products and pharmaceuticals industries.

A BS in Chemistry also stands out as a premiere accomplishment in applications for professional degree programs, including pharmacy, medicine, nursing, dentistry, medical technology, and many others. Previous BS Chemistry graduates from CU-Denver have gone on to medical, dental, and pharmacy schools; to Ph.D. programs in chemistry and biomedical sciences; and to productive careers in the biotech, pharmaceutical, and medical technology industries.

The Chemistry Department offers two options for a chemistry degree: a BS Chemistry or a BS Chemistry ACS Certified. Students interested in the chemistry major should consult regularly with the chemistry major advisor, Dr. Marta K. Maroń (marta.maron@ucdenver.edu). The Advisor can help you select the track that best fits your future goals. A complete description of the chemistry major programs may be obtained in the Department of Chemistry office (Science 3071) or Department website.

Qualified majors are strongly urged to participate in directed research with a research faculty member and in the departmental honors program. We also strongly encourage chemistry majors to participate in the Department by serving as graders, learning assistants, and/or teaching assistants. Contact the chemistry major advisor for more information and/or questions.

American Chemical Society (ACS) Certified Degree.

The ACS Certified degree requires a more thorough background than the minimum requirements for a Chemistry BS degree. Students planning on going into industry upon completing their Bachelor of Science are at an advantage completing the ACS Certified degree option.

- The ACS certified degree is open to all Chemistry majors regardless of future plans.
- See the ACS certified degree program page (p. 412) for additional coursework.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 66 credit hours, including a minimum of 44 CHEM credit hours.
2. Students must complete a minimum of 16 upper-division level (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.

4. Students must complete a minimum of 14 CHEM credit hours with CU Denver faculty, including CHEM 4128 Instrumental Analysis Laboratory, CHEM 4518 Physical Chemistry Laboratory: Reaction Analysis or CHEM 4538 Physical Chemistry Laboratory: Molecular Structure.

Program Restrictions, Allowances and Recommendations

1. A student who has declared a Chemistry major at CU Denver may not take additional chemistry courses outside of the Department for the purpose of applying those credits toward meeting the requirements of the major without prior written approval of the undergraduate Chemistry/Biochemistry advisor. No more than three additional hours of such pre-approved transfer credits will be allowed.
2. All courses applied to the chemistry major need to be taken within ten years of the graduation date with the exception of General Chemistry I and II Lecture and Lab: CHEM 2031 General Chemistry I, CHEM 2081 Honors General Chemistry I, CHEM 2038 General Chemistry Laboratory I, CHEM 2039 Majors General Chemistry I Laboratory, CHEM 2088 Honors General Chemistry I Laboratory, CHEM 2061 General Chemistry II, CHEM 2091 Honors General Chemistry II Lecture, CHEM 2068 General Chemistry Laboratory II, CHEM 2069 Majors General Chemistry II Laboratory and CHEM 2098 Honors General Chemistry II Laboratory . In the event that the student would like to apply for expired credit for CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50 th percentile on the ACS Standardized Exam for Organic Chemistry I.
3. PHYS 2321 Intro Experimental Phys Lab I and PHYS 2341 Intro Experimental Phys Lab II are specifically designed for students in non-Physics majors and can be paired with either PHYS 2010 College Physics I and PHYS 2020 College Physics II or PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based lectures. Students pursuing a second major in Physics should complete PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based and PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II.
4. Students may double major in Biochemistry and Chemistry. Students can apply the requirements for both majors, if the respective courses are a major requirement for both the Chemistry and Biochemistry major. A course cannot fulfill more than two requirement/elective areas in a student's degree.

Code	Title	Hours
Complete all of the following CHEM courses:		*48*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3011	Inorganic Chemistry	
CHEM 3018	Inorganic Chemistry Laboratory	
CHEM 3111	Analytical Chemistry	
CHEM 3118	Analytical Chemistry Laboratory	
CHEM 3481	Majors Organic Chemistry I	
CHEM 3488	Majors Organic Chemistry Laboratory I	
CHEM 3491	Majors Organic Chemistry II	
CHEM 3498	Majors Organic Chemistry Laboratory II	
CHEM 4121	Instrumental Analysis	
CHEM 4128	Instrumental Analysis Laboratory	
CHEM 4500	Foundations of Physical Chemistry [1]	
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4518	Physical Chemistry Laboratory: Reaction Analysis	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4538	Physical Chemistry Laboratory: Molecular Structure	
Complete ancillary coursework.		*18*
Mathematics (p.)		
Physics (p.)		
Total Hours		**66**

[1] Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry for CHEM 4500 Foundations of Physical Chemistry.

Math

Code	Title	Hours
Complete all of the following:		*8*
MATH 1401	Calculus I	
MATH 2411	Calculus II	

Physics

Code	Title	Hours
Complete one of the following sequences. Refer to note 3 under Program Restrictions, Allowances and Recommendations for alternative Physics lab information:		*10*
Sequence A [2]		
PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
Sequence B		
PHYS 2010	College Physics I	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2020	College Physics II	
PHYS 2341	Intro Experimental Phys Lab II	

[2] Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry for CHEM 4500 Foundations of Physical Chemistry.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/undergraduate-students/bachelor-science/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Chemistry, BS - ACS Certified

Introduction

Please click here (p. 394) to see Chemistry Department information.

The Chemistry Department offers two options for a chemistry degree: a BS Chemistry or a BS Chemistry ACS Certified. Students interested in the chemistry major should consult regularly with the chemistry major advisor, Dr. Marta K. Maroń (marta.maron@ucdenver.edu). The Advisor can help you select the track that best fits your future goals. A complete description of the chemistry major programs may be obtained in the Department of Chemistry office (Science 3071) or Department website.

Qualified majors are strongly urged to participate in directed research with a research faculty member and in the departmental honors program. We also strongly encourage chemistry majors to participate in the Department by serving as graders, learning assistants, and/or teaching assistants. Contact the chemistry major advisor for more information and/or questions.

Students planning chemistry as a career should be familiar with the recommendations of the American Chemical Society (ACS) for the professional training of chemists. The ACS certification requires students following the BS program of study take foundation courses in the five sub-disciplines of chemistry: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry. In addition, students take an in-depth (second semester) course in four out of the five sub-disciplines and are required to complete 400 hours of laboratory work post General Chemistry Laboratories. Laboratory work has to encompass four of the five sub-disciplines. General Chemistry I and II with laboratories are considered introductory courses and are prerequisites to foundation courses. No chemistry course with a grade of less than C (2.0) can be applied toward ACS certification. Students should check with the undergraduate chemistry major Advisor for details.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 72 credit hours, including a minimum of 50 CHEM credit hours.
2. Students must complete a minimum of 16 upper division level (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 14 CHEM credit hours with CU Denver faculty, including CHEM 4128 Instrumental Analysis Laboratory, CHEM 4518 Physical Chemistry Laboratory: Reaction Analysis or CHEM 4538 Physical Chemistry Laboratory: Molecular Structure.

Program Restrictions, Allowances and Recommendations

1. A student who has declared a chemistry major at CU Denver may not take additional chemistry courses outside of the department for the purpose of applying those credits toward meeting the requirements of the major without prior written approval of the undergraduate advisor. No more than 3 additional hours of such pre-approved transfer credits will be allowed.
2. All courses applied to the chemistry major need to be taken within ten years of the graduation date with the exception of General Chemistry I Lecture CHEM 2031 General Chemistry I or CHEM 2081 Honors General Chemistry I and Laboratory CHEM 2038 General Chemistry Laboratory I or CHEM 2039 Majors General Chemistry I Laboratory or CHEM 2088 Honors General Chemistry I Laboratory and General Chemistry II Lecture CHEM 2061 General Chemistry II or CHEM 2091 Honors General Chemistry II Lecture and Laboratory CHEM 2068 General Chemistry II Laboratory or CHEM 2069 Majors General Chemistry II Laboratory or CHEM 2098 Honors General Chemistry II Laboratory. In the event that the

student would like to apply for expired credit for Organic I Lecture CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.

3. PHYS 2321 Intro Experimental Phys Lab I and PHYS 2341 Intro Experimental Phys Lab II are specifically designed for students in non-Physics majors and can be paired with either PHYS 2010 College Physics I and PHYS 2020 College Physics II or PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based lectures. Students pursuing a second major in Physics should complete PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based and PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II.
4. Students may double major in Biochemistry and Chemistry. Students can apply the requirements for both majors, if the respective courses are a major requirement for both the Chemistry and Biochemistry major. Students must select unique Chemistry or Biochemistry elective courses to satisfy elective course credit requirements for both majors. A course cannot fulfill more than two requirement/ elective areas in a student's degree.

Code	Title	Hours
Complete all of the following required CHEM courses:		*51*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3011	Inorganic Chemistry	
CHEM 3018	Inorganic Chemistry Laboratory	
CHEM 3111	Analytical Chemistry	
CHEM 3118	Analytical Chemistry Laboratory	
CHEM 3481	Majors Organic Chemistry I	
CHEM 3488	Majors Organic Chemistry Laboratory I	
CHEM 3491	Majors Organic Chemistry II	
CHEM 3498	Majors Organic Chemistry Laboratory II	
CHEM 4121	Instrumental Analysis	
CHEM 4128	Instrumental Analysis Laboratory	
CHEM 4500	Foundations of Physical Chemistry [1]	
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4518	Physical Chemistry Laboratory: Reaction Analysis	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4538	Physical Chemistry Laboratory: Molecular Structure	
CHEM 4810	General Biochemistry I	
or CHEM 3810	Biochemistry	
or CHEM 5810	Graduate Biochemistry I	
Complete one of the following upper division Chemistry lecture elective courses:		*3*
CHEM 4110	Advanced Analytical Chemistry	
CHEM 4221	Practical Applications of Spectroscopy	
CHEM 4310	Advanced Organic Chemistry	
CHEM 4421	Cannabis Chemistry	
CHEM 4510	Computational Chemistry	
CHEM 4600	Advanced Topics in Chemistry [2]	
CHEM 4530	Advanced Physical Chemistry	
CHEM 4640	Artificial Intelligence in Chemistry and Biochemistry	
CHEM 4700	Environmental Chemistry	
CHEM 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4825	Biochemistry of Metabolic Disease	

CHEM 4820	General Biochemistry II	
CHEM 4835	Biochemistry of Gene Regulation and Cancer	
CHEM 4845	Molecular Modeling and Drug Design	
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine	
CHEM 5010	Advanced Inorganic Chemistry	
CHEM 5830	Graduate Biochemistry II	
Complete ancillary coursework.		*18*
Mathematics (p. 414)		
Physics (p.)		
Total Hours		**72**

1 Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry for CHEM 4500 Foundations of Physical Chemistry.

2 With permission from course instructor and undergraduate major advisor. The course must fulfill either the biochemistry or inorganic chemistry area.

Math

Code	Title	Hours
Complete all of the following:		*8*
MATH 1401	Calculus I	
MATH 2411	Calculus II	

Physics

Code	Title	Hours
Complete one of the following sequences. Refer to note 3 under Program Restrictions, Allowances and Recommendations for alternative Physics lab information:		*10*
Sequence A [3]		
PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
Sequence B		
PHYS 2010	College Physics I	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2020	College Physics II	
PHYS 2341	Intro Experimental Phys Lab II	

3 Students who choose Physics ***Sequence A*** can substitute MATH 2421 Calculus III or MATH 3511 Mathematics of Chemistry for CHEM 4500 Foundations of Physical Chemistry.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/undergraduate-students/bachelor-science/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Chemistry, BS/MS

Introduction

Please click here (p. 394) to see Chemistry department information.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

For more information contact the Graduate Advisor: Haobin Wang at HAOBIN.WANG@UCDENVER.EDU.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BS degree in chemistry, they may also complete some of the requirements for an MS degree in chemistry by participating in the BS/MS program using the following guidelines:

1. The student must apply and be accepted for participation in the BS/MS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Up to 12 semester hours of graduate-level course work may be taken as an undergraduate and applied toward the MS degree. With prior approval, these courses may also be applied toward the BS Chemistry (p. 409), BS Biochemistry (p. 405) or ACS certification requirements (p. 412) for the BS Chemistry degree.
3. The chemistry department will waive the requirement for placement examinations in each area of chemistry for which the student has completed the undergraduate sequence of courses and laboratories at the Downtown Campus with grades of B (3.0) or better for each course.
4. The student must apply for and be admitted to the MS program the semester that they plan to complete the BS Chemistry (p. 409), BS Biochemistry (p. 405) or ACS certification requirements (p. 412) at the Downtown Campus.

The BS/MS program allows undergraduate students who have begun their research as undergraduates to complete up to 12 semester hours toward the 30 semester hours required for an MS degree in chemistry while they are still completing their BS degree. This makes it possible for students to complete an MS degree in chemistry in only one year beyond the BS degree in chemistry (p. 409) or biochemistry (p. 405). Students entering the MS program through the BS/MS program option must fulfill all of the requirements of the Plan I or Plan II MS degree programs, which can be found here (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/chemistry/chemistry-ms/).

To learn more about the Student Learning Outcomes for the Chemistry MS program, please visit our website (https://clas.ucdenver.edu/chemistry/graduate-students/program-learning-goals/).

To learn more about the Student Learning Outcomes for the Chemistry BS program, please visit our website (https://clas.ucdenver.edu/chemistry/undergraduate-students/bachelor-science/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Biochemistry Minor

Introduction

Please click here (p. 394) to see Chemistry department information.

The objective of the biochemistry minor is to provide broad introductory course work and laboratory experience to science majors without the more technical mathematical and biochemical prerequisites required of the biochemistry major. The biochemistry minor is open to all CLAS students and should prove beneficial for science majors, pre-professional health science majors and students seeking science education certification.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a major/minor.
- To register your minor in chemistry, please visit the CLAS advising office in NC 1130. After establishing your minor status, you are encouraged to meet with the chemistry minor advisor, Dr. Jeff Knight. (jefferson.knight@ucdenver.edu)

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 25 CHEM credit hours.
2. Students must complete a minimum of nine upper division (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved courses.

Program Restrictions, Allowances and Recommendations

1. All courses applied to the Biochemistry Minor need to be taken within ten years of the graduation date with the exception of General Chemistry I and II Lecture and Lab: CHEM 2031 General Chemistry I, CHEM 2081 Honors General Chemistry I, CHEM 2038 General Chemistry Laboratory I, CHEM 2039 Majors General Chemistry I Laboratory, CHEM 2088 Honors General Chemistry I Laboratory, CHEM 2061 General Chemistry II, CHEM 2091 Honors General Chemistry II Lecture, CHEM 2068 General Chemistry Laboratory II, CHEM 2069 Majors General Chemistry II Laboratory and CHEM 2098 Honors General Chemistry II Laboratory. In the event that the student would like to apply for expired credit for CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.

Code	Title	Hours
Complete a minimum of 22 credits from the following required courses:		*22*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3411	Organic Chemistry I	

or CHEM 3481	Majors Organic Chemistry I	
CHEM 3421	Organic Chemistry II	
or CHEM 3491	Majors Organic Chemistry II	
CHEM 4810	General Biochemistry I [1]	
or CHEM 3810	Biochemistry	
or CHEM 5810	Graduate Biochemistry I	
CHEM 4828	Biochemistry Lab	
Complete 3 credit hours from one the following elective courses:		*3*
CHEM 4110	Advanced Analytical Chemistry	
CHEM 4411	Bioconjugate techniques and Theranostic Nanomedicine	
CHEM 4530	Advanced Physical Chemistry	
CHEM 4640	Artificial Intelligence in Chemistry and Biochemistry	
CHEM 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4820	General Biochemistry II	
CHEM 4825	Biochemistry of Metabolic Disease	
CHEM 4835	Biochemistry of Gene Regulation and Cancer	
CHEM 4845	Molecular Modeling and Drug Design	
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine	
CHEM 4840	Independent Study: Chem [2]	
CHEM 4880	Directed Research [2]	
Total Hours		**25**

1 Students may enroll in CHEM 5810 Graduate Biochemistry I with permission from the instructor.

2 Students may enroll in CHEM 4840 Independent Study: Chem and CHEM 4880 Directed Research with permission from the minor advisor prior to registration for the credit.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/students/undergraduate-programs/).

Chemistry Minor

Introduction

Please click here (p. 394) to see Chemistry department information.

The objective of the chemistry minor is to provide broad introductory course work and laboratory experience to science majors without the more technical mathematical and chemical prerequisites required of the chemistry major. The chemistry minor is open to all CLAS students and should prove beneficial for science majors, pre-professional health science majors and students seeking science education certification.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a major/minor.
- To register your minor in chemistry, please visit the CLAS advising office in NC 1130. After establishing your minor status, you are encouraged to meet with the chemistry minor advisor, Dr. Priscilla Burrow. (priscilla.burrow@ucdenver.edu)

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 24 semester hours of chemistry courses.
2. Students must complete a minimum of 15 upper division level (3000-level and above) CHEM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved course lists.

Program Restrictions, Allowances and Recommendations

1. All courses applied to the chemistry minor need to be taken within ten years of the graduation date with the exception of General Chemistry I Lecture CHEM 2031 General Chemistry I or CHEM 2081 Honors General Chemistry I and Laboratory CHEM 2038 General Chemistry Laboratory I or CHEM 2088 Honors General Chemistry I Laboratory and General Chemistry II Lecture CHEM 2061 General Chemistry II or CHEM 2091 Honors General Chemistry II Lecture and Laboratory CHEM 2068 General Chemistry Laboratory II or CHEM 2098 Honors General Chemistry II Laboratory. In the event that the student would like to apply for expired credit for Organic I Lecture CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.
2. Only one biochemistry course may count towards the Chemistry minor. Non-majors wishing to focus in biochemistry should consult the requirements for the Biochemistry Minor (p. 416) program.

Code	Title	Hours
Complete all of the following required courses:		*20*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
or CHEM 2039	Majors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3011	Inorganic Chemistry	

or CHEM 3111	Analytical Chemistry	
CHEM 3411	Organic Chemistry I	
or CHEM 3481	Majors Organic Chemistry I	
CHEM 3421	Organic Chemistry II	
or CHEM 3491	Majors Organic Chemistry II	
Complete one of the following upper division laboratory courses:		*1*
CHEM 3018	Inorganic Chemistry Laboratory	
CHEM 3118	Analytical Chemistry Laboratory	
CHEM 3418	Organic Chemistry Lab I	
or CHEM 3488	Majors Organic Chemistry Laboratory I	
CHEM 4828	Biochemistry Lab	
Complete three credit hours from the following upper division elective courses:		*3*
CHEM 3810	Biochemistry	
CHEM 4010	Advanced Inorganic Chemistry	
CHEM 4110	Advanced Analytical Chemistry	
CHEM 4121	Instrumental Analysis	
CHEM 4221	Practical Applications of Spectroscopy	
CHEM 4421	Cannabis Chemistry	
CHEM 4510	Computational Chemistry	
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4530	Advanced Physical Chemistry	
CHEM 4630 & CHEM 4580	Programming for Data Analysis in the Physical Sciences and Molecular Informatics	
CHEM 4640	Artificial Intelligence in Chemistry and Biochemistry	
CHEM 4700	Environmental Chemistry	
CHEM 4810	General Biochemistry I	
CHEM 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4825	Biochemistry of Metabolic Disease	
CHEM 4835	Biochemistry of Gene Regulation and Cancer	
CHEM 4840	Independent Study: Chem [1]	
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine	
CHEM 4880	Directed Research [1]	
CHEM 5010	Advanced Inorganic Chemistry	
CHEM 5110	Advanced Analytical Chemistry	
CHEM 5221	Practical Applications of Spectroscopy	
CHEM 5310	Advanced Organic Chemistry	
CHEM 5810	Graduate Biochemistry I	
Total Hours		**24**

[1] With prior permission from the Chemistry Minor Advisor.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/students/undergraduate-programs/).

Biochemistry Undergraduate Certificate

Introduction

Please click here (p. 394) to see Chemistry Department information.

Beginning with the Fall 2022 term, the Biochemistry Undergraduate Certificate is available to undergraduate non-degree seeking students. Degree seeking undergraduate students should consider completing the Biochemistry Minor (https://clas.ucdenver.edu/chemistry/students/undergraduate-students/biochemistry-minor/).

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- Students should meet with the Biochemistry Certificate Advisor Dr. Marta Maroń marta.maron@ucdenver.edu to file a certificate plan prior to the semester of graduation.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Biochemistry advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

1. Students must complete a minimum of 15 credit hours chosen from the approved courses.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours chosen from the approved courses below.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.7. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete 15 credit hours from the approved required and elective courses with CU Denver faculty.

Certificate Restrictions, Allowances and Recommendations

1. All courses applied to the Biochemistry Certificate need to be taken within ten years of the graduation date with the exception of General Chemistry I and II Lecture and Lab: CHEM 2031 General Chemistry I, CHEM 2081 Honors General Chemistry I, CHEM 2038 General Chemistry Laboratory I, CHEM 2039 Majors General Chemistry I Laboratory, CHEM 2088 Honors General Chemistry I Laboratory, CHEM 2061 General Chemistry II, CHEM 2091 Honors General Chemistry II Lecture, CHEM 2068 General Chemistry Laboratory II, CHEM 2069 Majors General Chemistry II Laboratory and CHEM 2098 Honors General Chemistry II Laboratory. In the event that the student would like to apply for expired credit for CHEM 3481 Majors Organic Chemistry I, the student will need to test at the 50th percentile on the ACS Standardized Exam for Organic Chemistry I.
2. Prerequisite courses do not have to be completed at CU Denver. Required courses including electives must be completed in residency at CU Denver. Any residency exemptions need to be approved in writing by the Biochemistry advisor prior to the course(s) being taken at another institution.

Code	Title	Hours
Students should be aware of and complete appropriate prerequisite courses before beginning the certificate. The following represent common prerequisites-check each individaul course to better understand the specific prerequisites required:		
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	

or CHEM 2098	Honors General Chemistry II Laboratory
BIOL 2010	Organisms to Ecosystems (Gen Bio)
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)
BIOL 2020	Molecules to Cells (Gen Bio)
or BIOL 2040	Honors Molecules to Cells (Gen Bio)
BIOL 2021	Molecules to Cells Lab (Gen Bio)
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)
CHEM 3411	Organic Chemistry I
or CHEM 3481	Majors Organic Chemistry I
CHEM 3418	Organic Chemistry Lab I
or CHEM 3488	Majors Organic Chemistry Laboratory I
CHEM 3421	Organic Chemistry II
or CHEM 3491	Majors Organic Chemistry II
CHEM 3428	Organic Chemistry Lab II
or CHEM 3498	Majors Organic Chemistry Laboratory II

Code	Title	Hours
Complete the following required courses:		*6*
BIOL 3611	General Cell Biology	
CHEM 4810	General Biochemistry I	
or CHEM 3810	Biochemistry	
or CHEM 5810	Graduate Biochemistry I	
Complete one of the following Biochemistry courses:		*3*
CHEM 4411	Bioconjugate techniques and Theranostic Nanomedicine	
CHEM 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4820	General Biochemistry II	
CHEM 4825	Biochemistry of Metabolic Disease	
CHEM 4835	Biochemistry of Gene Regulation and Cancer	
CHEM 4845	Molecular Modeling and Drug Design	
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine	
CHEM 5830	Graduate Biochemistry II	
Complete a minimum of 6 credits from the following Biochemistry elective courses, not already completed:		*6*
BIOL 3124	Introduction to Molecular Biology	
BIOL 3225	Human Physiology	
BIOL 3763	Biostatistics	
BIOL 3804	Developmental Biology	
BIOL 3832	General Genetics	
BIOL 4024	Introduction to Biotechnology	
BIOL 4064	Cell Biology of Disease	
BIOL 4125	Molecular Biology Laboratory	
BIOL 4144	Medical Microbiology	
BIOL 4165	Neurobiology	
BIOL 4550	Cell Signaling	
CHEM 3011	Inorganic Chemistry	
CHEM 3111	Analytical Chemistry	
CHEM 4121	Instrumental Analysis	
CHEM 4411	Bioconjugate techniques and Theranostic Nanomedicine	
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4815	Structural Biology of Neurodegenerative Diseases	
CHEM 4820	General Biochemistry II	

CHEM 4825	Biochemistry of Metabolic Disease
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine
CHEM 5830	Graduate Biochemistry II
PHYS 3151 & PHYS 3161	Biophysics Outlook I and Biophysics Outlook II [1]
PHYS 3452	Biophysics of the Cell NM
PSYC 3832	Neural Basis of Learning
Total Hours	**15**

[1] These two one-credit courses together fulfill one elective requirement.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/chemistry/undergraduate-students/biochemistry-certificate/).

Communication

Chair: Lisa B. Keränen
Graduate Director: Amy Hasinoff
Undergraduate Director: Hamilton Bean
Program Assistant: Michelle A. Médal
Undergraduate Advisors: Sarah Fields and Yvette Bueno Olson
Internship Director: Megan Hurson
Office: Student Commons Building, 1201 Larimer Street, 3rd Floor, Room 3014
Telephone: 303-315-1919

Overview

The Department of Communication at the University of Colorado Denver enriches understanding of the roles of communication in everyday life, organizational settings and public affairs. While the roots of the study of communication trace back to the ancient arts of philosophy, rhetoric, and aesthetics, its contemporary practices speak to the opportunities and dilemmas of participating in a globalized, mediated and multicultural society. A major in communication develops knowledge and skills that are required for many different fields, including advertising, business, international relations, education, public service, government and politics, health care and public relations. Because college graduates are expected to change careers approximately seven times over the course of their lives, and because employers across a wide variety of fields seek applicants with strong oral and written communication skills, a degree in communication is a versatile and timely choice.

The department's classes are organized in five pathways, including community service and public affairs, global and intercultural communication, health communication, media and cultural studies, and strategic communication. In addition, we offer a number of Inquiry and Analysis classes that bridge these areas. Across these pathways, students are encouraged to merge theoretical studies with practical applications, including in-service learning courses, travel study, internships, social justice projects and other experiential modes of learning. The Department of Communication seeks to cultivate the knowledge and ability to use communication to create a more equitable and humane world.

Undergraduate Information

Communication Major

Click here (p. 432) to learn about the requirements for a major in Communication.

Academic Honors

Academic honors are conferred at graduation on students whose achievements are above those required for the bachelor's degree. Three levels of honors are available to students. *Cum laude* honors are automatically earned by communication majors with a cumulative GPA of 3.0 and a GPA of 3.5 in 39 hours of communication courses. *Magna cum laude* and *summa cum laude* honors require the completion of COMM 4700 Thesis and Project Practicum. Additional information about academic honors may be obtained from the undergraduate advisor in communication.

Undergraduate Internships

Internships are opportunities for students to work in communication-related positions in the community and to receive academic credit for that work. These internships provide a way for students to maximize their communication background and their understanding of concepts, theories, models and frameworks within the communication discipline.

Students typically receive 3 hours of academic credit for a one-semester internship in which they work between 15 and 30 hours a week.

For further information about internships, contact Megan Hurson at megan.hurson@ucdenver.edu.

Communication Minor

Click here (p. 433) to learn about the requirements for a minor in Communication.

Undergraduate Certificates

Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/clas-iinterdisciplinary-certificates/digital-studies-certificate/) to learn about the requirements for an Undergraduate Certificate in Digital Studies.
Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/communication/global-intercultural-communication-certificate/) to learn about the requirements for an Undergraduate Certificate in Global and Intercultural Communication.
Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/communication/health-communication-certificate/) to learn about the requirements for an Undergraduate Certificate in Health Communication.
Click here (p. 438) to learn about the requirements for an Undergraduate Certificate in Mediation.
Click here (p. 440) to learn about the requirements for an Undergraduate Certificate in Strategic Communication.

Graduate Information

Please go to the **Graduate** catalog to read about our graduate programs.

Programs

- Communication, BA (p. 432)
- Communication Minor (p. 433)
- Global and Intercultural Communication Undergraduate Certificate (p. 434)
- Health Communication Undergraduate Certificate (p. 436)
- Mediation Undergraduate Certificate (p. 438)
- Strategic Communication Undergraduate Certificate (p. 440)

Faculty

Professors:

Sarah Fields, PhD, University of Iowa
Stephen J. Hartnett, PhD, University of California at San Diego

Professor Adjoint:

Monique L. Snowden, PhD, Texas A&M University

Associate Professors:

Hamilton Bean, PhD, University of Colorado at Boulder
Larry Erbert, PhD, University of Iowa
Mia Fischer, PhD, University of Minnesota
Amy Hasinoff, PhD, University of Illinois at Urbana-Champaign
Lisa B. Keränen, PhD, University of Pittsburgh

Associate Professors (Clinical Track):

Patrick Shaou-Whea Dodge, PhD, University of Denver

Assistant Professors:

Soumia Bardhan, PhD, University of New Mexico

Assistant Professors (Clinical Track):

Xiyuan Liu, PhD, University of Illinois at Chicago
Tamara Powell, PhD, University of California San Diego

Senior Instructors:

Yvette Bueno Olson, PhD, University of Miami
Kristy Frie, MA, Regis University
e. j. Yoder, PhD, University of Denver

Instructors:

Miroslav Atanassov, PhD, Ashbury Theological Seminary
Victoria E. Cann, PhD, Communication University of China
Megan Hurson, PhD, University of Colorado Boulder
Diann Logan, MA, University of Colorado Denver
Lacy Lowery, MA, San Diego State University
James McNeil, MA, University of Colorado Denver
Ali Nassiri, MA, University of Colorado Denver

Emeritus:

Brenda J. Allen, PhD, Howard University
Sonja K. Foss, PhD, Northwestern University
James F. Stratman, PhD, Carnegie-Mellon University
Barbara J. Walkosz, PhD, University of Arizona

Communication (COMM)

COMM 1001 - Presentations and Civic Life (3 Credits)
Democratic life is all about sharing ideas, debating key issues, and creating a sense of community—democracy is communication. This class teaches students how to deliver successful presentations in civic venues. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1011 - Communication and Communities (3 Credits)
All day, every day, we communicate with others. This survey class teaches students the fundamental roles communication plays in our everyday lives, work places, communities, and interpersonal relationships. The course foregrounds the ways different communities practice different methods of communication. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

COMM 1021 - Introduction to Media Studies (3 Credits)
We live in a media-saturated world: radio, TV, film, music, social media, smartphones and more. This class explores how media shape our everyday lives and how recent trends and shifts in media technologies are presenting opportunities for and challenges to democratic processes. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

COMM 1041 - Interpersonal Communication (3 Credits)
Want to learn how to get along with others? How to understand yourself? This class teaches students about self-esteem, the attraction process, nonverbal communication, relationship development, family communication, conflict resolution, and more. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1071 - Introduction to Journalism (3 Credits)
News is the lifeblood of democracy. This class teaches students the histories of, debates within, and best practices for journalism in print, digital, and other media. This class is writing intensive. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1111 - First Year Seminar (3 Credits)
This is a special seminar format class for incoming first year students; topics vary by semester so check with the instructor. The class is especially helpful for adjusting to life in college. Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

COMM 2017 - Dialogue, Debate, and Disagreement (3 Credits)
This course is designed for bilingual and non-native English speakers who seek to cultivate academic American English writing skills and U.S.-style debate norms. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 2020 - Communication, Citizenship, and Social Justice (3 Credits)
Introduction to debates about and means of practicing citizenship and social justice. Issues may include democratic participation, electoral politics, community engagement, and civil rights. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2021 - Communication and Citizenship (3 Credits)
This course explores the complexities of citizenship in cultural, national, and global forms. The class addresses the roles communication plays in practicing citizenship via such topics as cultivating a sense of belonging, debating the allocation of rights, practicing different modes of civic engagement, and more. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2030 - Digital Democracy (3 Credits)
Constant technological innovation means most Americans experience democracy in online formats; this class equips students with tools for living in our digital age. Topics include analyzing websites, studying online political organizing, and learning how to produce materials for online advocacy. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 2045 - Workplace Communication (3 Credits)
This class focuses on theories and practices of leadership, team-building, relationship development, and other workplace communication skills. Students learn and practice communication strategies for managing workplace challenges. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2050 - Professional Presentations (3 Credits)
Employers value clear, persuasive, and ethical communication. This class develops the communication skills used in business and professional settings, with an emphasis on sharing information, using media, and team-building. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2051 - Introduction to Strategic Communication (3 Credits)
Learn how to lead your organization with coordinated messaging. This class teaches marketing & public relations, targeted political messaging, and organizational communication, and studies how strategic communication works in different media, civic, and professional environments. Students will not receive credit for this class if they have already received credit for COMM 4635. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2071 - Media Writing Skills (3 Credits)
This class covers the major media writing types, including hard or straight news, features, reviews, editorials, web content, and social media, plus notetaking, interviewing, and editing skills. This class is writing intensive. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2075 - Researching and Writing in Comm (3 Credits)
This on-line class enables students to learn the research and writing skills that will enable them to excel in the rest of the classes they take to complete the Communication major. Because the course is intended for Communication majors, our readings and modes of analysis provide students an overview of the discipline in general and of the “Pathways” that structure our major. The class is writing intensive. Term offered: spring, summer, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2081 - New Media Production and Management (3 Credits)
This course develops skills in producing, distributing, and managing new media content using digital communication platforms; students also learn skills in management, networking, and new media leadership. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2082 - Introduction to Environmental Communication (3 Credits)
Climate change and environmental degradation are just two of numerous environmental crises that are debated, experienced, and shaped by competing interests. This class addresses communication about environmental and climate justice, sustainability, green marketing, and other topics. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2500 - Introduction to Health Communication (3 Credits)
Health industries are among the fastest growing sectors of the U.S. economy. This class enables students to begin thinking about their health, the health of their communities, and the health of the nation as systems of language and power. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

COMM 3071 - Advanced Media Writing Skills (3 Credits)
This class builds upon the skills learned in COMM 1071 and COMM 2071 by focusing on long-form writing suitable for magazines and websites. This class is writing intensive. Prereq: Students must have completed COMM 2071 with a C- or higher, or receive permission from the instructor, to enroll in this course. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2071 with a C- or higher, or receive permission from the instructor, to enroll in this course.
Typically Offered: Spring.

COMM 3081 - Introduction to Digital Studies (3 Credits)
Develop marketable skills such as building websites, making interactive maps, recording podcasts, and analyzing data while also studying the cultural and ethical dimensions of these technologies. Cross-listed with COMM 5081, HIST 3260, and HIST 5260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3230 - Chinese Communication & Culture in Context (3 Credits)
This course is designed for CU Denver students studying at the ICB program in Beijing. For such students, the course introduces Chinese communication practices and cultural expectations, easing the student's transition into life in Beijing. Field trips are required. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

COMM 3231 - Famous U.S. Trials (3 Credits)
Interested in Law School? . . . This introduction to the history of the U.S. trial court system contextualizes significant trials in historic and cultural moments. The course explores the roles of legal communication and mass communication in contemporary representations of trials. Cross-listed with HIST 3231. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3271 - Communication and Diversity (3 Credits)
Is America a melting pot or a raging fire of animosity? This class explores the complexities of communication across diverse identities such as race, ethnicity, gender, and political affiliation, and attempts to seek common ground by understanding our unique identities. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

COMM 3275 - Family Communication (3 Credits)
Communication within families can be loving, or terrible, or awkward. This class explores family communication processes in traditional and nontraditional families by examining conflict, family secrets, decision-making, and practical guidelines for improved communication patterns. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 3640 - TV, Culture, & Communication (3 Credits)
This course examines television theories and histories, from broadcast TV to internet streaming. Investigating TV industries and representations, students will gain an understanding of TV's role in contemporary culture. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3650 - Media and Society (3 Credits)
This class examines the intersections of new communication technologies, popular culture, and their impact on society. The class develops approaches for examining media as a key part of our everyday lives and as an object of scholarly inquiry. Term offered: fall, spring, summer. Prereq: COMM 1021 with a C- or higher or permission from the instructor. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

COMM 3660 - Social Media for Social Change (3 Credits)
Students analyze social media platforms, study and critique social movements that have harnessed the power of social media, and assess social justice events to understand how social media have been used to facilitate social change. Prereq: Students must have completed COMM 1011 and COMM 2020 with a C- or higher, or receive permission from the instructor, to enroll in this course. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must have completed COMM 1011 and COMM 2020 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 3840 - Independent Study (1-3 Credits)
Independent Studies are an ideal vehicle for working one-on-one with a faculty member to produce an original publishable piece of scholarship, or other media format, or a civic engagement project. Speak to your favorite faculty member/teacher about the possibilities. Note: Students must submit a special processing form, completely filled out and signed by the student and faculty member, describing the course expectations, assignments, and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

COMM 3939 - Internship (1-6 Credits)
Employers love work experience, so advance your communication skills while polishing your resume by working with a community leader. Internships enable students to gain entry level experience while exploring career interests and working environments; to apply course theory and concepts to build communication skills in a workplace of their choosing; and to develop a portfolio to showcase their career-focused assets. Note: This course fulfills the communication department's exit class requirement. Prereq: Students must have completed 15 credit hours at CU Denver and have a 2.75 GPA overall and must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

COMM 4000 - Communication and Sport (3 Credits)
While sports are often sought for entertainment, they are more than just a game: they both mirror and shape our understandings of gender, race, class, sexuality, ability, nationality and more. This class addresses these issues while also thinking about sports in global frameworks. Cross-listed with COMM 5000. Term offered: fall, spring. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4015 - Communication and Civility (3 Credits)
Examines the central role of communication in the creation of a civil and humane society. The definition, understanding, and practices of civility in public discourse and in professional, social, and personal relationships are explored. Film, literature, music, and other texts are utilized to illustrate key concepts and serve as catalysts for discussion. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4020 - Feminist Perspectives on Communication (3 Credits)
For thousands of years, men have run the show—feminism challenges that injustice by inviting us to imagine more equitable ways of being in the world. This class examines major feminist thinkers to imagine different communication paradigms. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

COMM 4021 - Perspectives on Rhetoric (3 Credits)
Rhetorical criticism is the study of how language works to persuade. This class surveys major thinkers to offers students a range of methods, which are then applied to address specific case studies. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5021. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4022 - Critical Analysis of Communication (3 Credits)
Are your beliefs rooted in facts or fictions, or a little of both? Does your race, or nationality, or gender influence your beliefs? This class surveys the research methods used to analyze messages from a range of critical perspectives. Cross-listed with COMM 5022. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4031 - Perspectives on Communication (3 Credits)
This class reviews major theories for studying communication, demonstrating that the field of communication is an amalgam of differing, and sometimes clashing, perspectives. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4040 - Communication, Prisons, and Social Justice (3 Credits)
This class examines the U.S. prison-industrial complex and enables students to envision ways of reducing crime and improving democracy by engaging in community service. Note: This course fulfills the communication department's exit class requirement. Strongly Recommended: Students complete COMM 2020 or COMM 2030 prior to taking this class. Cross-listed with COMM 5040. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4051 - Advanced Strategic Communication (3 Credits)
Provides senior-level training in hands-on communication environments where targeted messaging seeks specific outcomes. All students complete projects for community group, media outlet or corporation they choose. Students will not receive credit for this class if they have already received credit for COMM 4640. Note: This course fulfills the communication department's exit class requirement. Prereq: Students must have completed COMM 2051 or COMM 2071 or COMM 3680 with a C- or higher, or receive permission from the instructor, to enroll in this course. Cross-listed with COMM 5051. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must have completed COMM 2051 or COMM 2071 or COMM 3680 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 4082 - Wilderness Communication (3 Credits)
This class engage issues of wilderness, communication, and environmental sustainability. Students read philosophical, theoretical, and academic literature on human symbolic constructions of wilderness. Field trips may be involved; talk to the instructor. Cross-listed with COMM 5082. Term offered: summer, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

COMM 4111 - Theories of Leadership (3 Credits)
This class examines research and applications related to the major theories of leadership, and offers students the skills for practicing justice-based leadership. Cross-listed with COMM 5111. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with INTS 4152, RLST 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4215 - Ethics in Communication (3 Credits)
Designed to help students identify and address the daily ethical challenges that occur in private, social, and professional contexts. Focus is on recognizing, analyzing, and resolving real-world ethical dilemmas using diverse approaches to ethical decision making. Cross-listed with COMM 5215. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4221 - Research Methods: Qualitative (3 Credits)
This class applies qualitative research methods to human communication practices, including the processes of designing qualitative studies, collecting data, analyzing and interpreting data, and reporting results. Cross-listed with COMM 5221. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4230 - Nonverbal Communication (3 Credits)
We all speak volumes without using words. This class studies nonverbal behaviors that accompany or replace verbal communication, including facial expressions, eye contact, gestures, vocal characteristics, touch and personal adornment. Cross-listed with COMM 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4240 - Organizational Communication (3 Credits)
Churches, schools, companies, NGOs, the government—these are all organizations. This class addresses the theories of how organizations succeed or fail and stresses functional workplace skills and practices. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5240. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4245 - Advanced Organizational Communication (3 Credits)
We all live our lives embedded in organizations. This class builds on COMM 4240 to explore theoretical perspectives on communication in complex organizations. Students analyze assumptions and craft pragmatic solutions. Cross-listed with COMM 5245. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4255 - Negotiations and Bargaining (3 Credits)
This class engages Principled Negotiation theory and practice and involves numerous negotiation simulations. These are skills-based exercises that emphasize communication strategies and traverse a number of different negotiation contexts. Through the simulations, both group and dyadic work is practiced. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5255. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Summer.

COMM 4260 - Communication and Conflict (3 Credits)
Sometimes it seems like our days are full of conflict—why is that? This class studies the influence of communication on intrapersonal, interpersonal, intragroup, and intergroup conflict situations, and offers communication skills for building better relationships. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5260. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4262 - Mediation (3 Credits)
Knowing how to help find mutually satisfying resolutions to conflict is a terrific life skill. This class explores theoretical and practical aspects of mediation in a variety of contexts ranging from divorce mediation to labor-management disputes. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5262. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4265 - Gender and Communication (3 Credits)
Gender is constructed, performed, evaluated, and negotiated in our daily lives. This class explores scientific research on gender, gender stories in popular culture, the process of crafting and performing gender stories, and responses to gender performances. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5265. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

COMM 4268 - Communication and Diversity in U.S. History (3 Credits)
Explores issues of diversity and community in the construction of U.S. culture. Emphasis on legal and historical texts that codify or challenge majoritarian notions of difference and systems of social control. Cross-listed with COMM 5268. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4270 - Intercultural Communication (3 Credits)
The age of globalization means we are all neighbors, working across national boundaries and even continents. This class examines the philosophies, processes, problems, and potentials unique to communicating across cultures to address issues of social justice and ethical intercultural practices. We will consider the important role of context in interactions across cultures and subcultures, globally, transnationally, and within the U.S. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5270 and INTB 6270. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4280 - Communication and Change (3 Credits)
Examines the role of communication in change processes of various kinds, including social change and diffusion of innovations. Cross-listed with COMM 5280. Prereq: COMM 2082 with a C- or higher or permission from the instructor. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2082 with a C- or higher.

COMM 4282 - Environmental Communication (3 Credits)
Our world is shaped by policies and practices that threaten life on Earth. With such high stakes for making a more livable, just, and equitable future, this course examines storytelling, naming, framing, and the other communication concepts that are essential for navigating our shared planet. Prereq: COMM 2082 with a C- or higher permission from the instructor. Cross-listed with COMM 5282. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2082 with a C- or higher.
Typically Offered: Spring.

COMM 4290 - Web Design (3 Credits)
Covers writing web pages in HTML, beginning Photoshop, style sheets, bitmapped animations, issues of usable layout, navigability, structure, typography, and color on the web. Projects require students to develop static web sites. Cross-listed with COMM 5290. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4300 - Multimedia Authoring (3 Credits)
Analysis and evaluation of components of multimedia development and hands-on instruction featuring computer animation for advertising, training, and educational projects. Cross-listed with COMM 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4430 - Communication, China, and the US (3 Credits)
This course provides a senior-level opportunity to study how China and the USA have spoken about and to each other, from the Opium War through the Cyber Wars, thus situating both nations in a world of globalizing communication and interdependence. Note: this course fulfills the communication department's exit class requirement. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5430. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4500 - Health Communication (3 Credits)
This class examines the role of communication in a wide range of health contexts. Topics include cultural constructions of health and illness, public health communication campaigns, client-provider interactions, telemedicine, community-based health programs, and medical journalism. Note: This course fulfills the communication department's exit class requirement. Cross-listed with COMM 5500. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4525 - Health Communication and Community (3 Credits)
This course provides a broad knowledge base about health disparities and culturally competent frameworks in healthcare by enabling students to engage in service learning projects with local health-related community groups. Note: this course fulfills the communication department's exit class requirement. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4550 - Rhetorics of Medicine & Health (3 Credits)
This senior seminar explores why it matters how we talk and think about medicine and health. Case studies explore contagion, contested illnesses, the body, death, and biopower. The course requires extensive discussion of readings and an original research project. Note: This course fulfills the communication department's exit class requirement. Cross-listed with COMM 5550. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4557 - Crisis and Emergency Communication (3 Credits)
This course examines strategic communication practices throughout the three stages of a crisis or emergency event. Special emphasis is placed on crisis planning, emergency messaging, media relationships, image restoration, ethical responses, and organizational learning. Cross-listed with COMM 5557, PUAD 4620, and PUAD 6620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4558 - Digital Health Narratives (3 Credits)
This course blends readings, discussions, and activities about health narratives with digital media production skills to teach students how to create compelling digital stories about health-related topics. Students produce digital messages for the community group of their choosing. Note: this course fulfills the communication department's exit class requirement. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5558. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

COMM 4575 - Designing Health Messages (3 Credits)
Examines the roles of communication in the design and impact of health messages/campaigns. We will design and assess health communication messages/campaigns in a participatory, process#oriented way using varied communication tools. Cross-listed with COMM 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4600 - Media Theory (3 Credits)
Surveys a broad array of critical and interpretive approaches to the study of media. Approaches include political economic, semiotic, rhetorical, psychoanalytic, feminist, and cultural. Cross-listed with COMM 5600. Max Hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4601 - You Are What You Eat: Food as Communication (3 Credits)
Food is a source of identity, culture, and belonging. It communicates heritage and belonging. Because food provides communication channels for much of who we are as individuals, as a community, and as a society, this course analyzes food as a form of communication. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5601. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4610 - Communication, Media, and Sex (3 Credits)
This class develops the tools to think critically about representations of sexuality and to understand the social construction of sexuality, the role of sexual representations in mass media and society, and the complex relationships between sexual acts, identities, and desires. Restriction: Restricted to class level Junior, Senior, or permission of instructor. Cross-listed with WGST 4610. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4611 - Rhetoric of Global Food Policy (3 Credits)
This course examines stakeholder relations, agendas, and debates about global food policy using rhetorical concepts and analysis. Topics include the framing of debates about agriculture, hunger and obesity, the greening of food governance, sustainable food systems, and more. This course fulfills the communication department's pathway course requirement. Cross-listed with INTS 4611. Prereq: Junior standing or higher. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4620 - Health Risk Communication (3 Credits)
We are bombarded all day with communication expressing a sense of risk, of danger, of threats to our individual and communal well-being. This class acquaints students with contemporary theory, research, and practice in health risk communication across a variety of threats both real and imagined. Strongly Recommended: COMM 4500. Cross-listed with COMM 5620, ENVS 5620, and PBHL 4620. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4621 - Visual Communication (3 Credits)
If an image is worth a thousand words, then what happens when we ingest thousands of visual images each day? This class explores the social, cultural, and behavioral effects of visual images in a variety of contexts, including graffiti, film, advertising, art, and architecture. Prereq: COMM 1021 with a C- or higher. Cross-listed with COMM 5621. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Spring.

COMM 4660 - Queer Media Studies (3 Credits)
Queer Media Studies, a discussion-based seminar, investigates the history of a variety of LGBTQ+ media — including news, film, television, comics, games, music, and the Internet. Students engage in a variety of media projects to explore LGBTQ+ histories, queer aspects of media production, reception, and media messages. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5660, WGST 4660, WGST 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4665 - Principles of Advertising (3 Credits)
Provides a fundamental understanding and appreciation of advertising in today's global society, including consumer motivation, buying behavior, research, creative development, and media planning. Prereq: COMM 1021 with a C- or higher. Cross-listed with COMM 5665. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

COMM 4680 - Mass Media Law And Policy (3 Credits)
Covers issues of mass communication and the law and ethics, including issues of the First and Fourth Amendments, communication regulations, intellectual property, public access and obscenity. Cross-listed with COMM 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4681 - Communication Issues in Trial Court Practices and Processes (3 Credits)
Introduces students to communication and language research aimed at improving the fairness, reliability, and validity of court and judicial processes, including lawyer-client interviews, interrogatories, jury selection, jury instructions, witness examination, and the use of language evidence in court. Strongly Recommended: ENGL 2030. Cross-listed with COMM 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4682 - Political Communication (3 Credits)
Examines the communication processes involved in mediated political events. Topics include the stages of the campaign process, media coverage of the political campaign process, and literacy skills needed to understand political advertising. Cross-listed with COMM 5682. Prereq: COMM 2020 or COMM 2030 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2020 or COMM 2030 with a C- or higher.
Typically Offered: Fall.

COMM 4683 - Media in the Courtroom (3 Credits)
Law and Media: From the ever-present onscreen legal dramas and criminal procedurals to the presence of media in real-life courtrooms, law and media are hopelessly intertwined in the US. This course examines how televised versions of law potentially impact real-life courtrooms and vice versa. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

COMM 4688 - Senior Seminar: Transitioning from College to Career (3 Credits)
Ready to graduate? Then take this class, which prepares students to enter the job market and to integrate and reflect on their experience in communication. Must have senior standing. This course fulfills the communications department's exit course requirement. Restriction: Restricted to students with senior standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

COMM 4700 - Thesis and Project Practicum (3 Credits)
Focuses on strategies of research design and writing for undergraduate students working on theses for Latin honors. Students pick their own research topics. Note: This course fulfills the communication department's exit class requirement. To be eligible to enroll in this course you must be a senior majoring in communication, have a cumulative GPA of 3.0 and have a GPA in your communication coursework of 3.5. Cross-listed with COMM 6700. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4710 - Topics in Communication (1-3 Credits)
Special classes for faculty-directed experiences examining communication issues and problems not generally covered in the curriculum. Cross-listed with COMM 5710. Term offered: fall, spring, summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

COMM 4720 - Dynamics of Global Communication (3 Credits)
This class explores global communication dynamics by analyzing the relationships between world media, international events, economics, and geopolitics. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with COMM 5720. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4722 - Communicating Latinx Cultures (3 Credits)
Communicating Latina/o/x Cultures centers historical and contemporary vernacular and institutional discourse sand narratives about, by, and for Latina/o/x people and communities. Drawing on theories, methods, and practices to understand the complexities of Latina/o/x cultures and lives, we will investigate how different actors and activists express and experience borders, migration, dispossession, citizenship, colonialism/coloniality, colorism, white supremacy, environmental racism(including anti-Blackness), mono- and multilingualism, self-determination struggles, power, representation, resistance, and mutual support networks for alternative worldmaking. To situate these concepts and concerns, we will explore contexts and places ranging from Colorado to the Caribbean. Term Typically Offered: Spring. Cross-listed with COMM 5722, ETST 4722, and ETST 5722. Max hours: 3 credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4750 - Legal Reasoning and Writing (3 Credits)
Introduces the fundamentals of legal reasoning and legal argumentation through intensive class discussion, formal debate and writing. Attention is given to the relationship between case and statutory law and their application in trial and appeals courts in the United States. Strongly Recommended: ENGL 1020, ENGL 2030 and any 3000 level English course. Cross-listed with COMM 5750, PSCI 4757, 5747. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4760 - New Media and Society (3 Credits)
Does social media foster democracy and social justice or does it spread misinformation and extremism? In this course, students will investigate the social and political aspects of new media by examining the complex relationships between media technologies, industries, and society. Prereq: COMM 1021 and COMM 2020 with a C- or higher. Cross-listed with COMM 5760. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 and COMM 2020 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 4840 - Independent Study (1-3 Credits)
Independent Studies are an ideal vehicle for working one-on-one with a faculty member to produce a publishable piece of scholarship, or other media format, or a civic engagement project. Speak to your favorite teacher about the possibilities. Note: Students must submit a special processing form, completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

COMM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form, filled out and signed by the student and faculty member, describing the course expectations, assignments, and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

COMM 4995 - Global Study Topics (1-15 Credits)
Go see the world! This course is reserved for CU Denver faculty-led study abroad experiences. Versions go to China, Guatemala, Spain, Italy, and others. Destinations vary based on the semester so check with the Department for details. Students register through the Office of Global Education. Term offered: fall, spring, summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Fall, Spring, Summer.

Communication, BA

Introduction

Please click here (p. 423) to see Communication department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- Communication Department courses are offered in a variety of formats, including 8 and 16 week online classes and in person classes. Not all classes are offered in all formats. Talk to a major advisor for more information.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 COMM credit hours.
2. Students must complete a minimum of 15 upper-division (3000-level and above) COMM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 COMM credit hours, 15 of which must be upper division, with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Communication majors may complete up to six credit hours of COMM 3939 Internship.
2. A maximum of six credit hours of independent study courses may be applied to the major.
3. Students may transfer in up to 21 COMM credits.
4. In addition to required Communication courses, students are required to take seven elective courses (21 hours), which may consist of classes chosen from any combination of Communication Pathway and Inquiry and Analysis courses.
    - community service and public affairs
    - global and intercultural communication
    - health communication
    - media and cultural studies
    - strategic communication

Code	Title	Hours
Complete the following required courses:		*15*
COMM 1001	Presentations and Civic Life	
or COMM 20	Professional Presentations	
COMM 1011	Communication and Communities	
COMM 1021	Introduction to Media Studies	
COMM 2020	Communication, Citizenship, and Social Justice [1]	
COMM 2075	Researching and Writing in Comm	
Complete a minimum of seven courses (21 credit hours) in Communication (COMM) electives. At least 12 credits must be taken upper-division (3000 level or higher).		*21*
Complete at least one of the following exit courses: [2]		*3*
COMM 3939	Internship	
COMM 4040	Communication, Prisons, and Social Justice	
COMM 4051	Advanced Strategic Communication	
COMM 4430	Communication, China, and the US	
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4558	Digital Health Narratives	
COMM 4660	Queer Media Studies	
COMM 4688	Senior Seminar: Transitioning from College to Career	
COMM 4700	Thesis and Project Practicum	
COMM 4995	Global Study Topics (Travel Study)	
Total Hours		**39**

1 Students studying at the International College at Beijing will take COMM 2021 instead of COMM 2020.

2 Exit courses include a High Impact Practice, such as: experiential and service learning, collaborative learning, writing-intensive assignments, global education, a focus on diversity and inclusion, and/or a project-based capstone class.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/communication-undergraduate-learning-outcomes/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Communication Minor

Introduction

Please click here (p. 423) to see Communication department information.

Knowledge in most professional settings means little unless it can be communicated effectively. The minor in communication is designed to provide students who are not communication majors with knowledge and skills in communication that are useful in any discipline or profession.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- Communication Department courses are offered in a variety of formats, including 8 and 16 week online classes and in person classes. Not all classes are offered in all formats. Talk to a major advisor for more information.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 COMM credit hours (six courses).
2. Students must complete a minimum of six upper-division (3000-level and above) COMM credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine COMM credit hours with CU Denver faculty.

Code	Title	Hours
Complete the following courses:		*12*
COMM 1001	Presentations and Civic Life	
or COMM 2050	Professional Presentations	
COMM 1011	Communication and Communities	
COMM 1021	Introduction to Media Studies	
COMM 2020	Communication, Citizenship, and Social Justice	
Complete a minimum of two upper-division (3000 level or above) elective COMM courses.		*6*
Total Hours		**18**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/communication-undergraduate-learning-outcomes/).

Global and Intercultural Communication Undergraduate Certificate

Introduction

Please click here (p. 423) to see Communication Department information.

The Undergraduate Certificate in Global and Intercultural Communication will offer learners the opportunity to demonstrate expertise in global and intercultural communication. In an increasingly mobile and connected world, employees need to navigate complex international information systems, build multinational relationships, and create diverse and inclusive global businesses.

The Undergraduate Certificate in Global and Intercultural Communication will serve as a gateway for internships and careers related to advertising and marketing, international business, public relations, international journalism, foreign service, international law and negotiation, media and entertainment, and any other industry with a global focus. The certificate will also further the Communication Department's mission to guide students toward developing the skills, knowledge, and abilities necessary to use communication to create a more equitable and humane world.

Currently, global and intercultural communication exists as a pathway or cluster of courses from which students may choose at will. Creating a distinct global and intercultural communication certificate will help credential students and meet the needs of students from other majors who want to develop expertise in global and intercultural communication.

Program Delivery

- This is an online and on-campus program.

Declaring This Certificate

- Students should declare interest in completing the Undergraduate Certificate in Global and Intercultural Communication by emailing Dr. ej Yoder at ej.yoder@ucdenver.edu.
- Before the end of their final semester, students must send a completed certificate application (https://clas.ucdenver.edu/communication/certificates/) to Dr. ej Yoder at ej.yoder@ucdenver.edu.
- The approved certificate will be mailed to the student, and recorded on their transcript, after final grades are posted for the semester.
- Students who are not already enrolled at CU Denver must also complete an online Application for Non-Degree Admission prior to registering for courses.

Additional information about the undergraduate certificate in Global and Intercultural Communication may be obtained from Dr. ej Yoder, at ej.yoder@ucdenver.edu.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Global and Intercultural Communication advisor to confirm the best plans of study before finalizing them.

General Requirements

Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all of the credit hours for the certificate with CU Denver faculty.

Code	Title	Hours
Complete the following certificate requirements:		**12**
Complete the following required courses:		*6*
COMM 4270	Intercultural Communication	
COMM 4720	Dynamics of Global Communication	
Complete one of the following elective courses: [1]		*3*
ANTH 3121	Language, Culture, and Communication	
ANTH 3142	Cultural Diversity in the Modern World	
COMM 3271	Communication and Diversity	
COMM/INTS 4152	Religion & Communication	
COMM 4262	Mediation	
COMM 4430	Communication, China, and the US	
COMM 4611	Rhetoric of Global Food Policy	
COMM 4710	Topics in Communication	
ENGL 3080	Global Cinema	
ENGL 3798	International Perspectives in Literature and Film	
ENGL 4460	Contemporary World Literature	
ENGR 3600	International Dimensions of Technology and Culture	
ENGR 3995	Global Technology, Business & Culture	
ETST 3272	Global Media	
HIST 3500	African History in Novels and Films	
HIST 4461	The Modern Middle East	
HIST 4462	Islam in Modern History	
HIST 4621	Explorers and Exploration	
Complete one of the following Capstone courses: [2]		*3*
COMM 3939	Internship (Internship)	
COMM 4700	Thesis and Project Practicum (with an approved global or intercultural communication project)	
COMM 4995	Global Study Topics (or an approved global study class from another unit)	
INTS 4990	International Studies Capstone [3]	

[1] Some courses have prerequisites in their majors; students should see their major advisors for advice on which electives could count for them. Additional interdisciplinary global and intercultural studies electives may be approved by the certificate advisor.

[2] A global and/or intercultural communication related capstone must use experiential learning or a high impact practice. Additional capstone courses may be approved by the certificate advisor.

[3] Only International Studies majors can apply INTS 4990 International Studies Capstone as a capstone for the certificate.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/global-intercultural-certificate-learning-outcomes/).

Health Communication Undergraduate Certificate

Introduction

Please click here (p. 423) to see Communication Department information.

The Undergraduate Certificate in Health Communication (CHC) offers learners the opportunity to acquire and demonstrate expertise in health communication. The certificate program will provide students with a theoretically rich and practically relevant education in how health messages are generated, negotiated, assessed, and understood across a wide range of communication contexts, spanning intrapersonal communication to digital and mass media.

The Undergraduate Certificate in Health Communication serves as a gateway for internships and careers related to health, wellness, and medicine, and further the Communication Department's mission to guide students toward developing the skills, knowledge, and abilities necessary to use communication to create a more civil and humane world.

Program Delivery

- This is an on-campus and online program.

Declaring This Certificate

- Students should declare interest in completing the Undergraduate Certificate in Health Communication by emailing Dr. Tamara Powell at tamara.powell@ucdenver.edu. (tamara.powell@ucdenver.edu)
- Before the end of their final semester, students must send a completed certificate application (https://clas.ucdenver.edu/communication/certificates/) to Dr. Tamara Powell at tamara.powell@ucdenver.edu. (tamara.powell@ucdenver.edu)
- The approved certificate will be mailed to the student, and recorded on their transcript, after final grades are posted for the semester.
- Students who are not already enrolled at CU Denver must also complete an online Application for Non-Degree Admission prior to registering for courses.
- Additional information about the undergraduate certificate in Health Communication may be obtained from Dr. Tamara Powell, Student Commons Building 3311, 303-315-0310, or tamara.powell@ucdenver.edu.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Health Communication advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

1. Students must complete a minimum of 15 credit hours from approved courses.
2. Students must complete a minimum of 12 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours for the certificate with CU Denver faculty.

Code	Title	Hours
To build on a shared set of foundational theories, norms, and skills, all CHC-seeking students complete the following required courses:		*9*
COMM 2500	Introduction to Health Communication	
COMM 4500	Health Communication	
COMM 4575	Designing Health Messages	
CHC-seeking students will then broaden their perspective on health communication by taking an interdisciplinary health elective. Students must complete at least one interdisciplinary health elective from the following courses: [1]		*3*
ANTH 4600	Medical Anthropology	
COMM 4282	Environmental Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4558	Digital Health Narratives	
COMM 4601	You Are What You Eat: Food as Communication	
COMM/INTS 4611	Rhetoric of Global Food Policy	
COMM/PBHL 4620	Health Risk Communication	
ENGL 4290	Rhetoric and the Body	
ENGL 4745	Humanistic Writing About Medicine and Biology	
ETST/PBHL 3002	Ethnicity, Health and Social Justice	
GEOG 3501	Geography of Health	
PBHL 3030	Health Policy	
PBHL 3041	Health, Culture and Society	
PBHL 3070	Perspectives in Global Health	
PBHL 4040	Social Determinants of Health	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSCI 4330	U.S. Health Policy	
PSYC 3262	Health Psychology	
SOCY/PBHL 3440	Medical Sociology	
SOCY/HEHM 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4050	Health Disparities	
SOCY 4110	Sociology of Health Care	
SOCY 4220	Population Change and Analysis	
SOCY/WGST 4270	Social Meanings of Reproduction	
CHC-seeking students will complete their certificate by undertaking a semester-long capstone using experiential learning or high impact practices. Complete one of the following capstone courses: [2]		*3*
COMM 3660	Social Media for Social Change	

	COMM 3939	Internship
	COMM 4051	Advanced Strategic Communication
	COMM 4525	Health Communication and Community
	COMM 4550	Rhetorics of Medicine & Health
	COMM 4558	Digital Health Narratives
	COMM 4620/4620	Health Risk Communication
	PBHL 4099	Capstone Experience in Public Health
Total Hours		**15**

[1] Another elective with a health communication focus may be approved for the CHC in consultation with certificate advisor.

[2] Additional discipline-specific health methods courses may be approved by the certificate advisor.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/health-communication-certificate-learning-outcomes/).

Mediation Undergraduate Certificate

Introduction

Please click here (p. 423) to see Communication department information.

Mediation is a process in which conflict parties attempt to manage their differences with the assistance of a neutral third-party. The Certificate in Mediation is designed to provide intensive and in-depth training in mediation and communication skill competencies. Trained mediators are impartial process experts who utilize communication and conflict philosophy and theories to increase the probability of more favorable outcomes between parties in conflict. The undergraduate certificate is designed for communication majors or any student interested in developing practical skills in alternative dispute resolution. The courses in this certificate focus on alternative dispute processes that include strategies for managing conflict in personal, public, legal, political, governmental, and corporate contexts.

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

- Students should declare interest in completing the Undergraduate Certificate in Mediation by emailing Dr. Larry Erbert at larry.erbert@ucdenver.edu.
- Before the end of their final semester, students must send a completed certificate application (https://clas.ucdenver.edu/communication/certificates/) to Dr. Larry Erbert at larry.erbert@ucdenver.edu.
- The approved certificate will be mailed to the student, and recorded on their transcript, after final grades are posted for the semester.
- Students who are not already enrolled at CU Denver must also complete an online Application for Non-Degree Admission prior to registering for courses.

Additional information about the undergraduate certificate in Mediation may be obtained from Dr. Larry Erbert, Student Commons Building 3008, or larry.erbert@ucdenver.edu.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Mediation advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete a minimum of nine upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours for the certificate with CU Denver faculty.

Required Courses

Code	Title	Hours
Complete all of the following certificate requirements:		**12**
Complete the following required courses:		*6*
COMM 4262	Mediation	
COMM 4255	Negotiations and Bargaining [1]	
or COMM 4260	Communication and Conflict	
Complete two of the following elective courses:		*6*
COMM 3271	Communication and Diversity	
COMM 4240	Organizational Communication	
COMM 4255	Negotiations and Bargaining [1]	

or COMM 4260	Communication and Conflict
COMM 4282	Environmental Communication

[1] Students may complete both COMM 4255 Negotiations and Bargaining and COMM 4260 Communication and Conflict and then complete one elective rather than two.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/mediation-certificate-learning-outcomes/).

Strategic Communication Undergraduate Certificate

Introduction

Please click here (p. 423) to see Communication department information.

In keeping with worldwide transformations in information technology, media production, image consumption, message distribution, and norms of citizen engagement, the Department of Communication offers an Undergraduate Certificate in Strategic Communication (CSC).

Strategic Communication has been defined as the management function that entails planning, research, publicity, promotion and collaborative decision-making to help any organization's ability to listen to, appreciate and respond appropriately to those persons and groups whose mutually beneficial relationships the organization needs to foster as it strives to achieve its mission and vision.

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

- Students should declare interest in completing the Undergraduate Certificate in Strategic Communication by emailing Dr. Hamilton Bean at hamilton.bean@ucdenver.edu.
- Before the end of their final semester, students must send a completed certificate application (https://clas.ucdenver.edu/communication/certificates/) to Dr. Hamilton Bean at hamilton.bean@ucdenver.edu (hamilton.bean@ucdenver.edu.).
- The approved certificate will be mailed to the student, and recorded on their transcript, after final grades are posted for the semester.
- Students who are not already enrolled at CU Denver must also complete an online Application for Non-Degree Admission prior to registering for courses.

Additional information about the undergraduate certificate in Strategic Communication may be obtained from Dr. Hamilton Bean, Student Commons Building 3010, 303-315-1909, or hamilton.bean@ucdenver.edu (hamilton.bean@ucdenver.edu.).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Strategic Communication advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete a minimum of six upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours for the certificate with CU Denver faculty.

Code	Title	Hours
To build on a shared set of foundational theories, norms, and skills, all CSC-seeking students complete two required courses in Communication:		*6*
COMM 2051	Introduction to Strategic Communication	
COMM 2071	Media Writing Skills	
CSC-seeking students will then burnish their production skills by completing a 3 credit hour elective from chosen areas of content expertise by completing one of the following: [1]		*3*
COMM 2081	New Media Production and Management	
COMM 3660	Social Media for Social Change	
COMM 3939	Internship	
COMM 4665	Principles of Advertising	
FINE 2155	Introduction to Digital Photography	
FINE 2405	Introduction to Digital Design	
FINE 2415	Typography Studio	
FINE 3414	Motion Design I	
CSC-seeking students will complete their certificate by undertaking a semester-long, 3 credit hour capstone project conducted in conjunction with a community partner, by completing one of the following:		*3*
COMM 4051	Advanced Strategic Communication	
or FINE 4400	Design Studio III	
Total Hours		**12**

[1] Another elective with a strategic communication focus may be approved for the CSC in consultation with Dr. Hamilton Bean or a Department of Communication advisor.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/communication/strategic-communication-certificate-learning-outcomes/).

Economics

Chair: Brian Duncan
Program Assistant: Christine Lukvec
Office: Lawrence Street Center, LW-470
Telephone: 303-315-2030

Overview

Economics is the science of human behavior in market and non-market contexts. The rigorous and general scientific approach that characterizes economics lends itself to a remarkably wide field of practical application. Economists regularly apply their methods of analysis in fields such as government policy, international trade and finance, economic development, portfolio management and banking. But economics is increasingly seen as providing important insight into an enormous variety of social issues, including health care provision and health-related behaviors, law, criminal activity, environmental and natural resource problems, political activity, education, marketing and sports. The broad and rigorous training of economics majors accounts for the significant demand for their services in virtually every industry and government agency. Economics provides excellent preparation for advanced graduate study as well. Recent studies indicate that economics is a preferred undergraduate degree for those wishing to move on to prestigious business graduate programs and law schools.

Undergraduate Information

Economics Major

Click here (p. 457) to learn about the requirements for an Economics Major.
Click here (p. 861) to learn about the requirements for an Economics BA and Mathematics BS dual degree.

Economics Minor

Click here (p. 458) to learn about the requirements for an Economics Minor.

Economics Certificate

Click here (p. 459) to learn about the requirements for an Health and Development Economics Undergraduate Certificate.

Economics Bachelors to Masters programs

Click here (p. 447) to learn about the requirements for the Economics BA to Economics MA.
Click here (p. 450) to learn about the requirements for the Economics BA to Health Economics MS.

Honors in Economics

Students wishing to earn departmental honors in economics should consult with their advisor no later than the beginning of their senior year.

Cum laude will be awarded to students who complete an economics major with a 3.5 GPA in all upper-division (3000+) courses in economics taken at CU Denver, with a minimum of eight such courses, and either two additional electives in economics beyond those required for the major, taken at the 4000 or higher level, or an acceptable honors thesis. The thesis must be approved by a three-member committee of department faculty and will include a presentation of the results to that committee. Students should register for the thesis, using ECON 4850 Honors Independent Study: ECON as the course number, as a 3-semester hour independent study, in addition to the regular requirements for the major.

Magna cum laude will be awarded to students who complete an economics major with a 3.7 GPA in all upper-division (3000+) courses in economics taken at CU Denver, with a minimum of eight courses, and who complete an honors thesis designated as “acceptable” by their thesis committee.

Summa cum laude will be awarded to students who complete an economics major with a 3.88 GPA in all upper-division (3000+) courses in economics taken at CU Denver, with a minimum of eight courses, and who complete an honors thesis designated as “outstanding” by their thesis committee.

In order to be recognized in the graduation program as “Honors Pending,” a draft of the thesis must be submitted to the chair of the committee four weeks prior to the end of the semester. The oral presentation and other requirements must be completed one week before graduation.

In order to be recognized in the graduation program with the specific honors degree being conferred, e.g., *summa, magna*, etc., students must turn in the completed final copy of the honors thesis four weeks prior to the end of the semester, along with meeting other requirements by the week before graduation. Otherwise, recognition will come with the diploma after graduation.

Students who do not have an advisor should contact the department for assignment to an advisor. Students should meet with their advisor at least twice a year.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/) catalog to read about our graduate programs.

Programs

- Economics, 4 + 1 BA/ MA (p. 447)
- Economics, 4 + 1 BA/ Health Economics, MS (p. 450)
- Economics, BA/ Finance, BS in Business Administration - Dual Degree (p. 453)
- Economics, BA (p. 457)
- Economics Minor (p. 458)
- Health and Development Economics Undergraduate Certificate (p. 459)

Faculty

Professors:

Laura M. Argys, PhD, University of Colorado Boulder
Brian J. Duncan, PhD, University of California at Santa Barbara
Daniel I. Rees, PhD, Cornell University
W. James Smith, PhD, University of Colorado Boulder
Buhong Zheng, PhD, West Virginia University

Associate Professors:

Andrew I. Friedson, PhD, Syracuse University
Hani Mansour, PhD, University of California at Santa Barbara

Assistant Professors:

Ryan Brown, PhD, Duke University

Chloe East, PhD, University of California Davis
Maulik Jagnani, PhD, Cornell University
Phillip Luck, PhD, University of California Davis
Andrea Velasquez, PhD, Duke University

Clinical Teaching Assistant Professors:

Enoch Cheng, PhD, University of California-Los Angeles
Ernest Boffy-Ramirez, PhD, University of California at Santa Barbara
Soojae Moon-Anderson, PhD, University of Colorado Boulder

Instructors:

Debbie Evercloud, PhD, University of Virginia
Nicholas Golding, MA, Ohio State University
Lawrence Hamelin, MA, University of Colorado Denver
Kyle J. Hurst, MA, Baylor University
Kyle Montanio, PhD, University of Rhode Island
George K. Quansah, MA, University of Colorado Denver
Yue Shen, PhD, Queen's University
Kawin Thamtanajit, PhD, University of Delaware
Chun-Chieh Hu, PhD, Syracuse University

Economics (ECON)

ECON 1010 - Economics of Social Issues (3 Credits)
This course is designed for non-majors. Majors in economics will not receive credit toward departmental degree requirements. The focus of the course is on current issues in the economy, including poverty, social security, airline deregulation, government control of prices, economics of higher education, free trade, race and gender discrimination, unemployment, the role of government, and the national debt. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECON 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

ECON 2012 - Principles of Economics: Macroeconomics (3 Credits)
Covers topics of inflation, unemployment, national income, growth and problems of the national economy, stabilization policy, plus others at the discretion of the instructor. Purpose is to teach fundamental principles, to open the field of economics in the way most helpful to further a more detailed study of special problems, and to give those not intending to specialize in the subject an outline of the general principles of economics. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

ECON 2022 - Principles of Economics: Microeconomics (3 Credits)
Topics include price determination in a market system composed of households and firms: resource allocation and efficiency of various market structures, plus others at the discretion of the instructor. Note: Complementary to and normally taken following ECON 2012. ECON 2012 is not a prerequisite for ECON 2022. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

ECON 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Cross-listed with PBHL 3050 and PSYC 3050. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECON 3100 - Economics of Race and Gender (3 Credits)
Overview of the determinants of wages, employment and education in the labor market. Emphasizes the investigation of the evidence and theories of differentials that appear to be associated solely with race and sex, and public policies associated with discrimination and poverty. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ECON 3300 - Economics of Crime and Punishment (3 Credits)
Presents the economic approach to crime. Teaches economic reasoning in the analysis of the determinants of criminal activity, provides an in-depth analysis of the importance of socioeconomic factors in determining crime. Investigates the relative importance of labor market conditions, deterrence, and other factors in the level of criminal activity. Also covers topics to reduce crime such as, the death penalty, issues around victimless crime and public choices. Prereq: ECON 2022 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 3366 - Managerial Economics (3 Credits)
Intelligent business decisions require an understanding of how firms relate to their competitors, customers, and investors. In this course, you will use basic microeconomic theory to distinguish between different competitive markets, to design profitable pricing strategies, and to make management decisions with a problem-solving approach. Brief case studies of actual business decisions are included. Math skills needed are the equivalent of high-school algebra and geometry. Note: Students will not receive credit for ECON 3366 if they take it simultaneously or after successfully completing ECON 4310. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Additional Information: Teikyo.
Typically Offered: Fall, Spring, Summer.

ECON 3400 - Economics of Sex and Drugs (3 Credits)
Examines the political and policy issues surrounding controversial topics in human behavior. Economic models and reasoning are applied to examine issues such as juvenile substance use and abuse, and teen pregnancy. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

ECON 3415 - Issues in International Trade and Finance (3 Credits)
A survey of International Trade and Finance is provided and then applied to contemporary issues such as gains from trade, global and local economic inequality, trafficking, global capital markets, debt, the Eurozone and transmission of inflations and recessions internationally. This course is for non-economics majors & economics minors. Students may not receive credit if they take it after they have completed ECON 4410 or ECON 4420. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012 and 2022 with a C- or higher

ECON 3770 - Issues in Economic Development (3 Credits)
This is a survey course in development economics intended to provide a basic understanding of the economies of developing nations. Topics include issues and policies in economic development, comparative economic growth, demographic change, poverty, inequality, and migration. This course is for non-economics majors & economics minors. Students may not receive credit if they take it after they have completed ECON 4770. Prereq: ECON 2012 or ECON 2022 with a C- or higher. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Econ 2012 or Econ 2022 with a C- or higher
Typically Offered: Spring, Summer.

ECON 3801 - Introduction to Mathematical Economics (3 Credits)
Introduces the use of mathematics in micro- and macro-economic analysis. Emphasis on model-building techniques, solution methods, and economic interpretations. Prereq or Coreq: ECON 2012 with a C- or higher, prereq: ECON 2022 and College Algebra or higher (MATH 1110 or MATH 1070 or MATH 1401 or MATH 1130 or MATH 2411 or MATH 2421) with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECON 2012 with a C- or higher, prereq: ECON 2022 and College Algebra or higher (MATH 1110 or MATH 1070 or MATH 1401 or MATH 1130 or MATH 2411 or MATH 2421) with a C- or higher
Typically Offered: Fall, Spring.

ECON 3811 - Statistics with Computer Applications (4 Credits)
Introduces statistical methods and their application to quantitative problems in economics and social sciences. Note: Recitation is required. Prereq or Coreq: ECON 2022 AND Prereq: College Algebra or higher (MATH 1110, MATH 1070, MATH 1401, MATH 2411, MATH 2421, MATH 1130, or ECON 3801) with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq or co-req: ECON 2022 AND Prereq: College Algebra or higher (MATH 1110, MATH 1070, MATH 1401, MATH 2411, MATH 2421, MATH 1130, or ECON 3801) with a C- or higher.
Typically Offered: Fall, Spring.

ECON 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

ECON 4001 - Topics in Economics (3 Credits)
Studies special topics in economics to be selected by the instructor. Note: May be repeated for credit when topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ECON 4030 - Data Analysis with SAS (3 Credits)
Covers techniques for handling and interpreting economic data and conducting econometric analyses using SAS programming. Provides hands-on data management and analyses with large data sets with applications to business and economics, and prepare students for SAS Base Programmer certification exam. Prereq: ECON 3811 with a C- or higher. Cross-listed with ECON 5030. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4050 - Special Economic Problems (1-8 Credits)
Provides students the opportunity to critically evaluate some practical and theoretical problems under supervision, and to present results of their thinking to fellow students and instructors for critical evaluation. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Note: ECON 4050 for majors in economics, others by permission of instructor. Cross-listed with ECON 5050. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Econ 2012 or Econ 2022 with a C- or higher

ECON 4071 - Intermediate Microeconomic Theory (3 Credits)
Production, price and distribution theory. Study of value and distribution theories under conditions of varying market structures, with special references to the contribution of modern theorists. Prereq: ECON 2022 and ECON 3801 or Calculus II or Calculus III with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and ECON 3801 or (MATH 2411 or MATH 2421 with a C- or higher)
Typically Offered: Fall, Spring.

ECON 4081 - Intermediate Macroeconomic Theory (3 Credits)
National income and employment theory. Primary emphasis placed on determination of employment and prices. Problems of unemployment and inflation analyzed and appropriate policies considered. Prereq: ECON 2012 and ECON 3801 or MATH 2411 or MATH 2421 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012 and ECON 3801 or (MATH 2411 or MATH 2421 with C- or higher)
Typically Offered: Fall, Spring.

ECON 4090 - History of Economic Thought (3 Credits)
Traces the development of economic thought from ancient times to the 20th century. Considers the context in which these ideas were developed and their relationship to modern economic thought and contemporary economic problems. Note: Students may not receive credit for this course if they have already received credit for ECON 4091. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Cross-listed with ECON 5090. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Econ 2012 or Econ 2022 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4110 - Money and Banking (3 Credits)
Surveys major monetary and fiscal institutions such as commercial banks, the federal reserve system, savings institutions, and the structure of debt. The relationships between households, firms and financial intermediaries are explored, and the tools available to macroeconomic policy makers are described and evaluated. Prereq: ECON 4081 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4081 with a C- or higher.
Typically Offered: Fall.

ECON 4150 - Economic Forecasting (3 Credits)
Teaches forecasting techniques used in business and government to project trends and short-term fluctuations. Actual data are employed in instruction and labs. State-of-the-art spreadsheet and algorithms are introduced as part of the course work. Prereq: ECON 4811 with a C- or higher. Cross-listed with ECON 5150. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Spring.

ECON 4210 - Public Finance (3 Credits)
Surveys topics dealing with the economics of government activity, including the provision of public goods; the economics of the political process; welfare programs; pollution externalities; benefit-cost analysis; the U.S. tax structure; and the effects of taxes on economic behavior, economic performance and the distribution of income. Prereq: ECON 2022 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4240 - Economic Policy Analysis (3 Credits)
Deals with the application of economic analysis to the government policy-making process. Topics include public goods provision, externalities, cost-benefit analysis, judicial decision making, the economic analysis of the political process, government regulation of business, and tax incidence. Prereq: ECON 2012, ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012, ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher)

ECON 4310 - Managerial Economics (3 Credits)
The course adapts standard theory to more realistically discuss enterprise structure, firm and managerial behavioral incentives, and strategic behavior. Once a foundation is laid, successful and unsuccessful strategies and case studies are presented. Note: Students will not receive credit for ECON 3366 if they take it simultaneously or after successfully completing ECON 4310. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5310. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 4318 - Urban Economics (3 Credits)
Why do cities form and why are they so productive? How does the value of land change as the urban landscape develops? How do we address the difficulties that challenge modern cities, such as affordable housing, congestion, and crime? Prereq: ECON 3811 and ECON 4071 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 and ECON 4071 with a C- or higher.
Typically Offered: Fall.

ECON 4320 - Financial Economics (3 Credits)
This course focuses on the economics of decision-making under conditions of risk and uncertainty. Topics include theories of efficient markets, rational expectations, speculative bubbles, random walks, portfolio analysis, options, derivatives and future markets. Emphasis is on the application of basic theories to economic agents' behavior and case studies. Prereq: ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher), and ECON 3811 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher), and ECON 3811 with a C- or higher
Typically Offered: Spring.

ECON 4410 - International Trade (3 Credits)
Trade theory identifies who wins and loses from trade and why there are usually overall gains. Explores issues in immigration, globalization, income inequality, tariffs, dumping, the WTO, the environment, wages, and growth strategies among others. Prereq: ECON 3811 with a C- or higher. Cross-listed with ECON 5410. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4420 - International Finance (3 Credits)
The international adjustment process, including the foreign exchange market, balance of payments disequilibria, price and income adjustment, fiscal and monetary policy, and the international monetary system.
Prereq: ECON 3811 with a C- or higher. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4430 - Economic Growth (3 Credits)
Explores causes of rapid growth or decline over long periods for different regions of the world. Inequality, sustainability, culture, climate, technology and resources all play significant roles. Data and examples are used to determine the important influences. Prereq: ECON 2022 and ECON 3811 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and 3811 with a C- or higher
Typically Offered: Spring.

ECON 4461 - Economic Incentives (3 Credits)
A free market can fail with poorly designed economic incentives. The course examines incentives at work in a wide range of markets and investigates the market conditions that lead to a high level of welfare for the society. One such condition is the incentive for every participant to reveal his/her true preference. The incentive environments examined in this course include the principal-agent problems, job market signaling, mandatory retirement, professor's tenure, auctions of artifacts and assets, private provision of public goods, marriage matching, matching of organ donation (kidneys and lungs), school admissions, and majority voting. Prereq: ECON 3811, ECON 4071 and (ECON 3801 or MATH 2411 or MATH 2421) with a B+ or higher, or instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811, ECON 4071 and (ECON 3801 or MATH 2411 or MATH 2421) with a B+ or higher, or instructor permission.

ECON 4530 - Economics of Natural Resources (3 Credits)
Examines economic models of renewable resource management and models of exhaustible resource depletion. Analyzes decisions made by private firms and governments affecting the methods and rate of resource development. Examines the effects of resource development on economic growth and environmental quality and the effects of economic development on resource scarcity. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5530. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 4540 - Environmental Economics (3 Credits)
Economic approach to environmental problems: relationship between ownership structures, externalities and environmental damage; poverty, population pressure, and environmental degradation; valuation of environmental amenities; sustainability of economic activity; cost-benefit analysis applied to the environment; evaluation of alternative instruments for environmental control. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5540. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4550 - Game Theory and Economic Applications (3 Credits)
An introduction to economic applications of game theory. Concepts such as strategic and extensive form games, existence and selection of equilibrium will be covered. These concepts will be applied to understand market structure, location decisions, price competition, contracting, and auctions. Prereq: ECON 4071 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4071 with a C- or higher
Typically Offered: Fall.

ECON 4610 - Labor Economics (3 Credits)
Studies problems associated with the determination of wages, hours, and working conditions in the American economy. Strong emphasis placed on current research in such areas as welfare reform, minimum wage, return to schooling, immigration, labor market discrimination, and trade unions. Prereq: ECON 4811 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Fall.

ECON 4640 - Sports Economics (3 Credits)
Applies economic analysis to sports. Explores topics such as competition, on-field performance, players' compensation, profits in professional sports, anti-trust and labor law, the impact of sports on local communities and the links between athletics and education. Prereq: ECON 2022 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4660 - Health Economics. (3 Credits)
This course focuses on the analysis of current health care markets. Topics include the production of health, demand for health care, physician and hospital behavior, health insurance, medical malpractice, health externalities, managed care and the affordable care act. Prereq: ECON 3811 and 2022. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 and 2022
Typically Offered: Fall, Spring.

ECON 4670 - Economics of Population and Growth (3 Credits)
Theoretical modeling and data analysis will be used to analyze the economic causes, consequences and policy responses to population change through changes in fertility, marriage, health, mortality and migration. Prereq: ECON 2022 and (ECON 3811 or ECON 4811) with a C- or higher or instructor approval. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and (ECON 3811 or ECON 4811) with a C- or higher
Typically Offered: Fall.

ECON 4740 - Industrial Organization (3 Credits)
Examines the determinants of, and linkages between, market structure, firm conduct, and industrial performance. Topics include: determinants of the market size; impact of different market structures on prices and outputs; strategic behavior of firms to prevent entry or induce exit of rival firms; collusion; price discrimination; advertising; competition, monopoly, and innovation; implications for economic efficiency and public policy. Prereq: ECON 4071 with a C- or higher. Cross-listed with ECON 5740. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4071 with a C- or higher
Typically Offered: Spring.

ECON 4770 - Development Economics (3 Credits)
This course provides a theoretical and empirical framework for analyzing economic problems in developing countries focusing on the role of individuals, families and institutions. Topics include poverty traps, human capital accumulation, gender discrimination, microcredit and violent conflict. Prereq: ECON 4811 with a C- or higher. Cross-listed with ECON 6770. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Fall.

ECON 4803 - Mathematical Economics (3 Credits)
Application of mathematical techniques in micro-and macro-economic analysis. Topics include single and multivariable differentiation, basic matrix algebra, optimization, and integration with applications to economic models of consumption, production, market equilibrium, national accounting, and growth. Prereq: ECON 3801 or MATH 2411 or MATH 2421 and ECON 4071 with a C- or higher. Cross-listed with ECON 5803. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3801 or MATH 2411 or MATH 2421 and ECON 4071 with a C- or higher.
Typically Offered: Fall, Spring.

ECON 4811 - Introduction to Econometrics (3 Credits)
Introduces econometric methods and their applications to quantitative economic problems. Simple and multiple regression models and problems encountered in their applications are developed in lectures and applied computer projects. Prereq: ECON 3811 or MATH 3382 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 or MATH 3382 with a C- or higher.
Typically Offered: Fall, Spring.

ECON 4812 - Advanced Econometric Methods (3 Credits)
This course will focus on econometric methods used to generate causal inference in experimental and non-experimental settings. Topics covered will include the potential outcomes framework, randomized experiments, natural experiments, difference-in-differences, fixed effects, matching, instrumental variables, and regression discontinuity. Prereq: ECON 4811 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.

ECON 4840 - Independent Study: ECON (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ECON 4850 - Honors Independent Study: ECON (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

ECON 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Economics, 4 + 1 BA/ MA

Introduction

Please click here (p. 441) to see Economics department information.

The 5-year BA/MA program in economics allows qualified undergraduate students to take graduate level economic courses and count them towards their B.A. degree in economics. After completing the B.A. in economics, up to 12 graduate level ECON credits taken as an undergraduate student may be counted again towards the M.A. in Economics degree. This allows a student to complete both the B.A. and M.A. in economics in as few as five years. Students who decide not to pursue a M.A. degree in economics at CU Denver after earning a B.A. degree in economics retain their B.A. degree along with all other undergraduate credentials on their transcripts.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Economics faculty advisors and their CLAS Advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

Admission Requirements

1. Meet all general admission requirements
2. Be a current CU Denver Economics major with a GPA of 3.5 or better
3. The following courses must have been completed at CU Denver with a grade of B+ or better: MATH 2411 Calculus II, MATH 2421 Calculus III, ECON 4071 Intermediate Microeconomic Theory, and ECON 4811 Introduction to Econometrics
4. Students should apply in the semester when requirement 3 is satisfied (typically in the end of the fall semester of their junior year - as in the sample curriculum below)
5. Students who do not meet requirements 2 and 3 may apply, but must submit GRE scores and two letters of recommendation; otherwise both are waived
6. To apply, students should submit a regular application to the MA ECON program here: https://application.admissions.ucdenver.edu/apply/. Students who meet the admission requirements are not required to pay the application fee, submit GRE scores, letters of recommendation, or a personal statement. Students must contact the graduate advisor after their application is submitted to have this material waived (brian.duncan@ucdenver.edu)

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 48 credit hours with a minimum of 33 ECON and 12 MATH credit hours.
2. Students must complete a minimum of 18 upper division (3000-level and above) credit hours in ECON electives, with a maximum of 12 graduate level (5000-level and above) ECON credit hours. A maximum of six credit hours at the 3000 level in ECON will count toward degree requirements.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and students must earn a minimum grade of B- (2.7) in all graduate courses that apply to the graduate degree. Students must achieve a minimum cumulative major GPA of 2.0 and master's GPA of 3.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major or graduate requirements.
4. Students must complete a minimum of 18 ECON credit hours including ECON 4811 Introduction to Econometrics, with CU Denver faculty. Once a student has enrolled at CU Denver, no more courses in the major can be taken outside the CU Denver Economics Department. This includes courses offered at Metropolitan State University. The department reserves the right to require a demonstration of competence for any core courses not taken from CU Denver faculty. All graduate level courses applied to the MA with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

While students are completing a BA degree in economics (p. 457), they may also complete some of the requirements for an MA degree in economics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/economics-ma/) by participating in the BA/MA program using the following guidelines:

1. The student must apply and be accepted for participation in the BA/MA program prior to completion of the BA degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students need to take only three electives at the undergraduate level; the three electives taken at the graduate level are double counted in fulfilling both BA and MA graduation requirements. ECON 5803 (Graduate Mathematical Economics) is waived or can be counted as one graduate-level elective. The total dual credits are 12 hours.
3. A minimum of 12 of the 18 upper division credit hours required must be completed with 4000 level and above courses.
4. Students will earn the BA degree in their fourth year upon completing all the requirements for the BA degree. Students are expected to be admitted to the Graduate School in their final two semesters prior to earning the MA degree.
5. All courses other than ECON 2012 Principles of Economics: Macroeconomics and ECON 2022 Principles of Economics: Microeconomics require written department approval to be transferred in as satisfying major requirements.
6. MATH 2411 Calculus II or MATH 2421 Calculus III with a grade of B or higher will satisfy the ECON 3801 Introduction to Mathematical Economics requirement. If a student completes ECON 3801 Introduction to Mathematical Economics, and then subsequently or concurrently completes MATH 2411 Calculus II, with a grade of B or higher, ECON 3801 Introduction to Mathematical Economics will be counted as an Economics 3000-level elective but will not be used as an elective for evaluation of Honors. However, if a student has already completed MATH 2411 Calculus II with a B or better, then ECON 3801 Introduction to Mathematical Economics taken subsequently cannot be counted as an elective.

Undergraduate Required Courses

Code	Title	Hours
Complete all of the following courses:		*30*
ECON 2012	Principles of Economics: Macroeconomics	
ECON 2022	Principles of Economics: Microeconomics	
ECON 4071	Intermediate Microeconomic Theory	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4811	Introduction to Econometrics	
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3382	Statistical Theory	
or ECON 3811	Statistics with Computer Applications	

Undergraduate Electives

Code	Title	Hours
Complete six additional three credit hour courses in economics at the 3000-level or higher; a minimum of six credits must be at the 4000-level and a maximum of 12 credits may be at the graduate level.		*18*
Internships and independent studies require approval of the department chair in order to be given credit as an economics course.		
The following graduate courses are approved to apply to the Economics BA degree		
ECON 5073	Microeconomic Theory	
ECON 5083	Macroeconomic Theory [1]	
ECON 5813	Econometrics I	
ECON 5823	Econometrics II	
ECON 6053 & ECON 6054	Seminar In Applied Economics and Seminar In Applied Economics II	
ECON 6073	Research Seminar	

[1] ECON 5803 (Graduate Mathematical Economics) can be waived with the graduate advisor's approval. Students who have ECON 5803 waived will be required to complete 12 graduate elective credit hours to complete the MA.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/master-arts-economics/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Economics, 4 + 1 BA/ Health Economics, MS

Introduction

Please click here (p. 441) to see Economics department information.

Overview

The 5-year BA/MS in Health Economics program allows qualified undergraduate students to take graduate level economic courses and count them towards their B.A. degree in economics. After completing the B.A. in economics, up to 12 graduate level ECON credits taken as an undergraduate student may be counted again towards the MS in health economics degree. This allows a student to complete both the B.A. and M.S. in as few as five years. Students who decide not to pursue a M.S. degree in health economics at CU Denver after earning a B.A. degree in economics retain their B.A. degree along with all other undergraduate credentials on their transcripts.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Economics faculty advisors and their CLAS Advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

Admission Requirements

1. Meet all general admission requirements.
2. Be a current CU Denver Economics major with a GPA of 3.5 or better
3. The following courses must have been completed at CU Denver with a grade of B+ or better: MATH 2411 Calculus II, MATH 2421 Calculus III, ECON 4071 Intermediate Microeconomic Theory, and ECON 4811 Introduction to Econometrics
4. Students should apply in the semester when requirement 3 is satisfied (typically in the end of the fall semester of their junior year - as in the sample curriculum below)
5. Students who do not meet requirements 2 and 3 may apply, but must submit GRE scores and two letters of recommendation; otherwise both are waived
6. To apply, students should submit a regular application to the MS Health Economics program here: https://application.admissions.ucdenver.edu/apply/. Students who meet the admission requirements are not required to pay the application fee, submit GRE scores, letters of recommendation, or a personal statement. Students must contact the graduate advisor after their application is submitted to have this material waived (brian.duncan@ucdenver.edu)

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 48 credit hours with a minimum of 33 ECON and 12 MATH credit hours.
2. Students must complete a minimum of 18 upper division (3000-level and above) credit hours in ECON electives, with a maximum of 12 graduate level (5000-level and above) ECON credit hours. A maximum of 6 credit hours at the 3000 level in ECON will count toward degree requirements.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and students must earn a minimum grade of B- (2.7) in all graduate courses that apply to the graduate degree. Students must achieve a minimum cumulative major GPA of 2.0 and master's GPA of 3.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major or graduate requirements.
4. Students must complete a minimum of 18 ECON credit hours including ECON 4811 Introduction to Econometrics, with CU Denver faculty. Once a student has enrolled at CU Denver, no more courses in the major can be taken outside the CU Denver Economics Department. This includes courses offered at Metropolitan State University. The department reserves the right to require a demonstration of competence for any core courses not taken from CU Denver faculty. All graduate level courses applied to the MA with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

While students are completing a BA degree in economics (p. 457), they may also complete some of the requirements for an MS in health economics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/economics/health-economics-ms/) by participating in the BA/MS program using the following guidelines:

1. The student must apply and be accepted for participation in the BA/MS program prior to completion of the BA degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students need to take only three electives at the undergraduate level; the three electives taken at the graduate level are double counted in fulfilling both BA and MS graduation requirements. ECON 5803 (Graduate Mathematical Economics) is waived or can be counted as one graduate-level elective. The total dual credits are 12 hours.
3. A minimum of 12 of the 18 upper division credit hours required must be completed with 4000 level and above courses.
4. Students will earn the BA degree in their fourth year upon completing all the requirements for the BA degree. Students are expected to be admitted to the Graduate School in their final two semesters prior to earning the MS degree.
5. All courses other than ECON 2012 Principles of Economics: Macroeconomics and ECON 2022 Principles of Economics: Microeconomics require written department approval to be transferred in as satisfying major requirements.
6. MATH 2411 Calculus II or MATH 2421 Calculus III with a grade of B or higher will satisfy the ECON 3801 Introduction to Mathematical Economics requirement. If a student completes ECON 3801 Introduction to Mathematical Economics, and then subsequently or concurrently completes MATH 2411 Calculus II, with a grade of B or higher, ECON 3801 Introduction to Mathematical Economics will be counted as an Economics 3000-level elective but will not be used as an elective for evaluation of Honors. However, if a student has already completed MATH 2411 Calculus II with a B or better, then ECON 3801 Introduction to Mathematical Economics taken subsequently cannot be counted as an elective.

Undergraduate Required Courses

Code	Title	Hours
Complete all of the following courses:		*30*
ECON 2012	Principles of Economics: Macroeconomics	
ECON 2022	Principles of Economics: Microeconomics	
ECON 4071	Intermediate Microeconomic Theory	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4811	Introduction to Econometrics	
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3382	Statistical Theory	
or ECON 3811	Statistics with Computer Applications	

Undergraduate Electives

Code	Title	Hours
Complete six additional three credit hour courses in economics at the 3000-level or higher; a minimum of six credits must be at the 4000-level and a maximum of 12 credits may be at the graduate level.		*18*
Internships and independent studies require approval of the department chair in order to be given credit as an economics course.		
The following graduate courses are approved to apply to the Economics BA degree.		
ECON 5073	Microeconomic Theory	
ECON 5083	Macroeconomic Theory [1]	
ECON 5813	Econometrics I	
ECON 5823	Econometrics II	
ECON 7073	Advanced Microeconomic Theory II	
ECON 7661	Health Economics I	
ECON 7662	Health Economics II	

[1] ECON 5803 (Graduate Mathematical Economics) can be waived with the graduate advisor's approval. Students who have ECON 5803 waived will be required to complete 12 graduate elective credit hours to complete the MS.

To learn more about the undergraduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

To learn more about the graduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/master-science-health-economics/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Economics, BA/ Finance, BS in Business Administration - Dual Degree

Economics Overview

Please click here (p. 441) to see Economics department information.

Please click here (p. 376) to see College of Liberal Arts and Sciences information.

The economics major provides flexibility and opportunity and can take you in many directions, both inside and outside of the field of economics. In fact, most economics majors do not work as economists, but in business careers of all varieties. The analytical and quantitative skills that one acquires as an economics major are much in demand in the job market and are also highly attractive to law schools and MBA programs. Whatever your career plans, economics training can give you the edge you need to further your long-term goals.

An economics major equips you with technical skills for investigating cause-and-effect relationships. Economists have the expertise to evaluate real-world data in a way that discovers patterns and predictability. In this respect, they can design strategies for individuals, firms, and governments that circumvent the harmful effects of economic disruptions. The keen analytical skills of an economics major who also understands financial markets are sought by businesses and institutions looking for knowledgeable leaders who can make informed decisions in dynamic environments.

Trained economists are employed by private businesses, banks, law firms, consulting firms, international corporations and agencies, public utilities, federal and local governments, and colleges and universities. Economists who work in the private sector spend much of their time using the tools of economics to analyze issues that are important to their employers. For instance, these economists might be called upon to forecast the demand for the company's product, to perform cost-benefit or optimal pricing analyses for potential projects, or to analyze the effects of government regulations on the company.

The BA program in economics provides training in basic economic theory, the use of statistical techniques to analyze economic phenomena, and more specific fields within economics, such as labor economics, international trade, developing and transitional economies, and money and banking. Economics majors from CU Denver have recently gone on to prestigious positions at companies such as Qwest, Merck Pharmaceuticals, Citicorp and Lockheed Martin, and to graduate schools at universities such as Harvard, Stanford, University of Chicago, University of Rochester, and Columbia.

The Economics Department at CU Denver is comprised of energetic, internationally recognized scholars who are publishing their cutting-edge research in prominent academic journals. In addition to their scientific publications, CU Denver economics professors have a direct impact on policy through avenues such as consulting for members of the US Congress and various branches of the Colorado state government, conducting federally funded policy-oriented research, and participating in local and national conferences and seminars. This research activity of the department allows the students to gain exposure to knowledge and tools at the frontiers of economic analysis. In addition, students receive the most up-to-date information and the latest analysis of such topics as taxation, the effectiveness of poverty programs, international trade and finance, economic foreign policy, the consequences of government intervention in the economy, the economic analysis of race and sex discrimination, and many other contemporary topics. Research publications of CU Denver professors can be found on faculty member's profiles.

Faculty are accessible and friendly, and the department provides plenty of opportunity to receive "hands-on" experience and training in the field of economics. They include teaching and research assistantships in the department, and internships under the guidance of the department. There are also opportunities to take economics classes at our campus overseas. Currently, students can take economics classes in Beijing, and receive full credit toward their major and CLAS requirements.

Finance Overview

Please click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/business-school/) to see Business School information.

The principal areas of study in finance are financial management in small and large businesses, investments, financial institutions, and international finance. The study of finance is intended to provide an understanding of fundamental theory and practice pertaining to finance; to make sound financial decisions. Students are taught to think logically about financial problems, so that they can formulate and implement value maximizing decisions and policies for the business. For this purpose, it is necessary to understand the importance of finance in the economy and the functions and purposes of monetary systems, credit, prices, money markets, and financial institutions. Emphasis is placed on financial policy, management, control, analysis, and decision making.

The finance major provides students with the skills to succeed in all areas of finance. Numerous job opportunities exist in the field of business finance and with financial institutions, mutual funds, securities firms, personal wealth management firms, and financial planning firms including positions involving an understanding and sale of securities.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major in the College of Liberal Arts & Sciences. Click here (p. 134) to go to information about declaring a major in the Business School.

These degree requirements are subject to periodic revision by the academic department, and the Business School and College of Liberal Arts and Sciences reserve the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, students should consult regularly with their major advisors and CLAS advisor to confirm the best plans of study before finalizing them.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- Business School Graduation Requirements (p. 132)

- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 65 credit hours from approved major courses.
2. Students must complete a minimum of 18 upper division (3000-level and above) ECON credit hours, with a minimum of 12 at the 4000-level.
3. Students must earn a minimum grade of C-(1.7) in all ECON and FNCE courses taken at CU Denver and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken on a P+/P/F or S/U basis will not count toward the major. Students must meet all minimum grade and GPA requirements for Business School Core courses and prerequisites as well.
4. Students must complete a minimum of 18 ECON credit hours including ECON 4811 Introduction to Econometrics, with CU Denver faculty. Once a student has enrolled at CU Denver, no more courses in the major can be taken outside the CU Denver Economics Department. This includes courses offered at Metropolitan State University. The department reserves the right to require a demonstration of competence for any core courses not taken from CU Denver faculty. Students must meet all minimum residency requirements for Business School courses and must complete MGMT 4500 Business Policy and Strategic Management with CU Denver faculty, as well.

Program Restrictions, Allowances and Recommendations

1. Students who carefully follow the recommended curriculum will be able to double count several courses, which will allow them to complete both degrees in 127 credit hours.
2. A minimum of 12 of the 18 upper division credit hours required must be completed with 4000 level and above courses.

Code	Title	Hours
Complete all CU Denver, Business School and CLAS graduation requirements. [1]		
The following courses are required and will apply to multiple areas:		*26*
BLAW 3050	Business Law and Ethics (Satisfies Business School and CLAS Behavioral Science graduation req.)	
COMM 2050	Professional Presentations (Satisfies Business School and CLAS Communicative Skills graduation req.)	
ECON 2012	Principles of Economics: Macroeconomics (Satisfies CU Denver Social Science Core and Business School Graduation Requirement)	
ECON 2022	Principles of Economics: Microeconomics (Satisfies CLAS Social Science Graduation Requirement and Business School Graduation Requirement)	
ECON 3100	Economics of Race and Gender (Satisfies CU Denver Cultural Diversity Core Requirement)	
ECON 3811	Statistics with Computer Applications (Satisfies BANA 2010 Business School Graduation Requirement)	
ENGL 3170	Business Writing (Satisfies Business School and CLAS Humanities graduation reqs.)	
MATH 1110	College Algebra (Satisfies CU Denver Core Mathematics and Business School Graduation Requirement)	
Complete the following Finance course requirements [2]		*18*
FNCE 3500	Management of Business Capital	
FNCE 3600	Financial Markets and Institutions	
FNCE 3700	Investment and Portfolio Management	
FNCE 4370	International Financial Management (Satisfies the Business School International Studies graduation requirement)	
FNCE 4500	Corporate Financial Decisions	
Complete three credits from 3000 or 4000-level FNCE courses. [4]		
Complete the following Economics course requirements		*21*
ECON 3801	Introduction to Mathematical Economics [3]	
ECON 4071	Intermediate Microeconomic Theory	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4811	Introduction to Econometrics	
Complete nine credit hours from 4000-level ECON courses. [4]		
Total Hours		**65**

[1] Students must complete the CU Denver Graduation Requirements (p. 126), the CU Denver Business School Gradation Requirements (p. 132) and the CU Denver CLAS Graduation Requirements (p. 376). Students who carefully follow the recommended curriculum will be able to apply several courses to multiple requirements.

[2] A grade of C or higher must be earned in all Business courses that are used as prerequisites.

[3] MATH 2411 Calculus II or MATH 2421 Calculus III with a grade of B or higher will satisfy the ECON 3801 Introduction to Mathematical Economics requirement. If a student completes ECON 3801 Introduction to Mathematical Economics, and then subsequently or concurrently completes MATH 2411 Calculus II, with a grade of B or higher, ECON 3801 Introduction to Mathematical Economics will be counted as an Economics 3000-level elective but will not be used as an elective for evaluation of Honors. However, if a student has already completed MATH 2411 Calculus II with a B or better, then ECON 3801 Introduction to Mathematical Economics taken subsequently cannot be counted as an elective.

[4] Economics internships and independent studies require approval of the Economics department chair in order to be given credit as an economics course.

A maximum of six credit hours of independent study may be applied towards the Finance degree requirements. Finance independent study request form must be signed by the student, the instructor, the program director and the Assistant Dean in order to be given credit as a finance course.

To learn more about the Economics BA Student Learning Outcomes, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

To learn more about the Finance BS in Business Administration Student Learning Outcomes, please visit our website (https://business.ucdenver.edu/bsba/finance/#careers_and_learning_outcomes-835).

To review the Degree Map for this program, please refer to the sequencing below or visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/business-school/). Each student will have unique circumstances and needs, so everyone should consult with their advisors frequently to determine the best schedule each term and to stay on track.

Students are encouraged to take courses during summer terms, to balance their workload across each semester. Students who place into a MATH course lower than MATH 1110 and those who must complete one or two semesters of language should consult with their advisor to develop a more customized degree map.

To review a list of courses will fulfill CU Denver Core Arts, Behavioral Science, Humanities and Natural and Physical Sciences with and without a lab, please check the CU Denver Core Curriculum. (p. 122)

Course	Title	Hours
Year 1		
Semester 1		
ENGL 1020	Core Composition I	3
MATH 1110	College Algebra (Satisfies CU Denver Core Mathematics and Business School Graduation Requirement)	4
CU Denver Core Natural and Physical Sciences with a lab (p. 455)		4
ECON 2012	Principles of Economics: Macroeconomics (Satisfies CU Denver Social Science Core and Business School Graduation Requirement)	3
UNIV 1110	College Success	1
	Hours	**15**
Semester 2		
CU Denver Core Arts or Behavioral Science or Humanities or Natural and Physical Sciences without a Lab (MATH is recommended) (p. 455)		3
ECON 2022	Principles of Economics: Microeconomics (Satisfies CLAS Social Science Graduation Requirement and Business School Graduation Requirement)	3
ENGL 2030	Core Composition II	3
ISMG 2050	Business Problem Solving Tools	3
CU Denver Core Natural and Physical Sciences with a lab (p. 455)		4
	Hours	**16**
Summer		
CU Denver Core Arts or Behavioral Science or Humanities or Natural and Physical Sciences without a Lab (MATH is recommended) (p. 455)		3
	Hours	**3**
Year 2		
Semester 1		
CU Denver Core Arts or Behavioral Science or Humanities or Natural and Physical Sciences without a Lab (MATH is recommended) (p. 455)		3
ACCT 2200	Financial Accounting and Financial Statement Analysis	3
COMM 2050	Professional Presentations (Satisfies Business School and CLAS Communicative Skills graduation req.)	3
ECON 3100	Economics of Race and Gender (Satisfies CU Denver Cultural Diversity Core Requirement)	3
ECON 3811	Statistics with Computer Applications (Satisfies BANA 2010 Business School Graduation Requirement)	4
	Hours	**16**
Semester 2		
CU Denver Core Arts or Behavioral Science or Humanities or Natural and Physical Sciences without a Lab (MATH is recommended) (p. 455)		3
ACCT 2220	Managerial Accounting and Professional Issues	3
BUSN 2110	Cultivating Emotional Intelligence	1
ECON 3801	Introduction to Mathematical Economics	3
ECON 4071	Intermediate Microeconomic Theory	3
ENGL 3170	Business Writing (Satisfies Business School and CLAS Humanities graduation reqs.)	3
	Hours	**16**
Summer		
CU Denver Core International Perspectives (p. 455)		3
	Hours	**3**
Year 3		
Semester 1		
BANA 3000	Operations Management	3
ECON 4081	Intermediate Macroeconomic Theory	3
FNCE 3000	Principles of Finance	3
MGMT 3000	Managing Individuals and Teams	3
MKTG 3000	Principles of Marketing	3
	Hours	**15**
Semester 2		
BLAW 3050	Business Law and Ethics (Satisfies Business School and CLAS Behavioral Science graduation req.)	3
BUSN 3110	Career and Professional Development	1
FNCE 3500	Management of Business Capital	3
FNCE 3700	Investment and Portfolio Management	3
ISMG 3000	Technology In Business	3
One 4000-level or higher ECON elective		3
	Hours	**16**
Summer		
Complete language proficiency or use the summer to catch up.		
	Hours	**0**

Year 4		
Semester 1		
FNCE 4370	International Financial Management (Satisfies the Business School International Studies graduation requirement)	3
FNCE 3600	Financial Markets and Institutions	3
ECON 4811	Introduction to Econometrics	3
Business School Experiential Learning: Business students must earn 3 semester hours of credit in an approved Experiential Learning course. This can be satisfied by completing: an Internship; MGMT 4900 Project Management and Practice/ ISMG 4900 Project Management and Practice; MGMT 4120 Collaborative Experiential Learning; MGMT 4825 Sustainable Change Leadership: Turning Business Into a Force for Good; or completing an approved Study Abroad business course.		3
One 4000-level or higher ECON elective		3
	Hours	**15**
Semester 2		
FNCE 4500	Corporate Financial Decisions	3
4000-level or higher FNCE elective		3
4000-level or higher ECON elective		3
MGMT 4500	Business Policy and Strategic Management	3
Complete any outstanding requirements.		
	Hours	**12**
	Total Hours	**127**

Economics, BA

Introduction

Please click here (p. 441) to see Economics department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 40 credit hours from approved major courses.
2. Students must complete a minimum of 18 upper division (3000-level and above) ECON credit hours, with a minimum of 12 at the 4000 level.
3. Students must earn a minimum grade of C-(1.7) in all major courses taken at CU Denver and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken on a P+/P/F or S/U basis will not count towards the major.
4. Students must complete a minimum of 18 ECON credit hours including ECON 4811 Introduction to Econometrics, with CU Denver faculty. Once a student has enrolled at CU Denver, no more courses in the major can be taken outside the CU Denver Economics Department. This includes courses offered at Metropolitan State University. The department reserves the right to require a demonstration of competence for any core courses not taken from CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. A minimum of 12 of the 18 upper division credit hours required must be completed with 4000 level and above courses.
2. MATH 2411 Calculus II or MATH 2421 Calculus III with a grade of B or higher will satisfy the ECON 3801 Introduction to Mathematical Economics requirement. If a student completes ECON 3801 Introduction to Mathematical Economics, and then subsequently or concurrently completes MATH 2411 Calculus II, with a grade of B or higher, ECON 3801 Introduction to Mathematical Economics will be counted as an Economics 3000-level elective but will not be used as an elective for evaluation of Honors. However, if a student has already completed MATH 2411 Calculus II with a B or better, then ECON 3801 Introduction to Mathematical Economics taken subsequently cannot be counted as an elective.

Code	Title	Hours
Complete all of the following required courses:		*22*
ECON 2012	Principles of Economics: Macroeconomics	
ECON 2022	Principles of Economics: Microeconomics	
ECON 3801	Introduction to Mathematical Economics [1]	
ECON 3811	Statistics with Computer Applications	
ECON 4071	Intermediate Microeconomic Theory	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4811	Introduction to Econometrics	
Complete six additional three-credit-hour courses in economics at the 3000-level or 4000-level; a minimum of 12 credits must be at the 4000-level. [2]		*18*
Total Hours		**40**

[1] MATH 2411 Calculus II or MATH 2421 Calculus III with a grade of B or higher will satisfy the ECON 3801 Introduction to Mathematical Economics requirement. If a student completes ECON 3801 Introduction to Mathematical Economics, and then subsequently or concurrently completes MATH 2411 Calculus II, with a grade of B or higher, ECON 3801 Introduction to Mathematical Economics will be counted as an Economics 3000-level elective but will not be used as an elective for evaluation of Honors. However, if a student has already completed MATH 2411 Calculus II with a B or better, then ECON 3801 Introduction to Mathematical Economics taken subsequently cannot be counted as an elective.

[2] Internships and independent studies require approval of the department chair in order to be given credit as an economics course.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Economics Minor

Introduction

Please click here (p. 441) to see Economics department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ECON credit hours.
2. Students must complete a minimum of nine upper division (3000-level and above) ECON credit hours.
3. Students must earn a minimum grade of C-(1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine ECON credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. At least two of the upper division courses must not overlap with courses for the student's major program.
2. All courses other than ECON 2012 Principles of Economics: Macroeconomics and ECON 2022 Principles of Economics: Microeconomics require written department approval to be transferred in as satisfying minor requirements.

Code	Title	Hours
Complete the following required courses:		*6*
ECON 2012	Principles of Economics: Macroeconomics	
ECON 2022	Principles of Economics: Microeconomics	
Complete nine credit hours from upper-division (3000 level or higher) ECON electives.		*9*
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

Health and Development Economics Undergraduate Certificate

Introduction

Please click here (p. 441) to see Economics department information.

There is an increasing need for individuals who understand health related issues and policies, particularly those affecting developing countries, and have the quantitative skills that enable them to analyze and present real-world data to support effective decision-making. The purpose of the Certificate in Health & Development Economics is to provide students with a strong foundation in economic concepts, data analysis, and policy issues pertaining to healthcare and economic development. Students will learn how to use data to develop and evaluate programs and policies using modern statistical methods. The certificate gives students the applied skills and institutional knowledge increasing in demand in the health research sector, enhancing the student's career and professional development. The certificate can also provide a springboard towards pursuing a graduate degree in Health Economics.

Program Delivery

- This is an on-campus and online program.

Declaring This Certificate

Admission Requirements

- Be a current CU Denver undergraduate or graduate student in any discipline, or a CU Denver non-degree seeking student with a Bachelor's degree.
- Have a GPA of 2.0 or higher
- Have completed intermediate microeconomics and introduction to econometrics, or equivalent coursework or professional experience.
- Please contact the certificate faculty advisor.

For questions about the Health & Development Economics certificate program contact Debbie Evercloud (debbie.evercloud@ucdenver.edu) or W. James Smith (jim.smith@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Health & Development Economics advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlines below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 ECON credit hours.
2. Students must complete a minimum of 12 upper division (3000-level and above) ECON credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all certificate credit hours with CU Denver faculty.

Certificate Restrictions, Allowances and Recommendations

1. Students are expected to meet all course prerequisites or have the program director's approval.
2. CU Denver undergraduate students may complete the certificate concurrently with their major and/or minor degree program, counting the credits towards both the certificate and their B.A. or B.S. major/minor degrees. However, courses that have already been counted towards any degree already awarded may not be counted towards the certificate retroactively.
3. Undergraduate students are encouraged to use the certificate program as a bridge to a graduate degree. Qualified students in their senior year may substitute the graduate level ECON 5030 Data Analysis with SAS for ECON 4030 Data Analysis with SAS, ECON 7661 Health Economics I for ECON 4660 Health Economics., and/or ECON 7662 Health Economics II for ECON 4770 Development Economics. Undergraduate students, non-degree seeking students, and graduate students outside the economics department must meet the prerequisite requirements or **have the graduate advisor's approval** prior to taking any graduate level econ course.
4. No course may be taken more than twice.

Code	Title	Hours
Complete the following courses:		*12*
ECON 4030	Data Analysis with SAS	
ECON 4660	Health Economics.	
ECON 4770	Development Economics	
ECON 4812	Advanced Econometric Methods	
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/certificate-health-development-economics/).

English

Chair: Wayne Miller
Associate Chair: Rodney Herring
Program Coordinator: Francine Olivas-Zarate
Program Assistant: Emilio Marquez
Office: 1015 9th Street Park
Telephone: 303-315-7830
Fax: 303-315-7826
Website: clas.ucdenver.edu/english/ (http://clas.ucdenver.edu/english/)

Overview

English majors learn to acquire and synthesize information and to present their ideas and opinions skillfully. They find employment in fields in which the sophisticated use of language is necessary for achievement and advancement. Many graduates go on to postgraduate study, not only in writing, film studies and literature, but to schools of medicine, law, journalism and business.

Undergraduate Information

English

Undergraduates wishing to major in English (ENGL) or English Writing, Rhetoric and Technology (ENWT) must declare the major by the time they have completed 60 semester hours. The English major allows a student to choose from one of three options: literature, creative writing or film studies. Students interested in a double major must choose one option in English or the English Writing, Rhetoric and Technology major and are required to complete 21 different courses (63 hours).

Click here (p. 478) to learn more about the English Writing, Rhetoric, and Technology Major.
Click here (p. 474) to learn more about the English Major-Film Studies Option.
Click here (p. 471) to learn more about the English Major-Creative Writing Option.
Click here (p. 476) to learn more about the English Major-Literature Option.

BA in English With Secondary Teacher Licensure Endorsement

Students seeking secondary English teacher licensure may pursue a BA in English with Secondary Teacher Licensure Endorsement. This enables them to complete their English major as well as fulfill requirements for licensure at the undergraduate level.

Click here (p. 480) to learn more about the English, BA with Secondary Teacher Licensure Endorsement.

Departmental Honors

Latin honors may be earned by participating in the department's honors program. Students with a 3.5 GPA in English are encouraged to begin the program in their junior year. The program requires additional course work (3 hours) and affords students the opportunity to work individually with the professor of their choice. Detailed information is available in the English department office.

Minors

The Department of English also offers four separate minors. No courses taken for a minor may be counted toward an English major.

- Literature Minor (p. 487)
- English Writing, Rhetoric, and Technology Minor (p. 484)
- Creative Writing Minor (p. 482)
- Film Studies Minor (p. 486)

Additional Information

For additional information on majors, options, minors and certificates call the Department of English office at 303-315-7830.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/english/) catalog to read about our graduate programs.

Programs

- English - Creative Writing Option, BA (p. 471)
- English - Film Studies Option, BA (p. 474)
- English - Literature Option, BA (p. 476)
- English Writing, Rhetoric, and Technology, BA (p. 478)
- English, BA with Secondary Teaching Licensure Endorsement (p. 480)
- Creative Writing Minor (p. 482)
- English Writing, Rhetoric, and Technology Minor (p. 484)
- Film Studies Minor (p. 486)
- Literature Minor (p. 487)
- Proposal and Grant Writing Undergraduate Certificate (p. 489)
- Teaching English Language Learners Undergraduate Certificate (CTELL) (p. 490)
- Technical and Professional Writing Undergraduate Certificate (p. 491)

Faculty

Professors:

Joanne Addison, PhD, Purdue University
Colleen Donnelly, PhD, University of Washington
Jeffrey Franklin, PhD, University of Florida
Sarah Hagelin, PhD, University of Virginia
Wayne Miller, MFA, University of Houston
Bradford K. Mudge, PhD, University of Texas, Austin
Gillian Silverman, PhD, Duke University
Cynthia Wong, PhD, University of Wisconsin, Milwaukee

Associate Professors:

Pompa Banerjee, PhD, University of Massachusetts
Brian Barker, PhD, University of Houston
Nicole Beer, PhD, University of Missouri-Columbia
Teague Bohlen, MFA, Arizona State University
Michelle Comstock, PhD, Purdue University
Fatima Esseili, PhD, Purdue University
Rodney Herring, PhD, University of Texas, Austin
Philip Joseph, PhD, State University of New York, Buffalo
Joanna Luloff, MFA, Emerson College; PhD, University of Missouri
John Tinnell, PhD, University of Florida, Gainesville
Ian Ying, PhD, University of Arizona

Assistant Professors:

Kari Campeau, PhD, University of Minnesota
Andrew Scahill, PhD, University of Texas, Austin

English (ENGL)

ENGL 1000 - Special Topics (3 Credits)
This topics course at the 1000 level is designed to offer flexibility for the English department for lower division offerings. Students may enroll up to 3 times to total no more than 9 credits but the topics must differ for each course. Repeatable.Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENGL 1010 - Writing Workshop (3 Credits)
Focuses on the abilities and skills needed to write effective expository prose. Emphasizes frequent writing, both in and out of class, with special attention to writing short essays well. Writers learn to write confidently at the sentence and paragraph levels, and to develop their grammatical and mechanical skills. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 1020 - Core Composition I (3 Credits)
Provides opportunities to write for different purposes and audiences, with an emphasis on learning how to respond to various rhetorical situations; improving critical thinking, reading, and writing abilities; understanding various writing processes; and gaining a deeper knowledge of language conventions. Term offered: fall, spring, summer. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-C01.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-CO1, Communication; Denver Core Requirement, English Composition.
Typically Offered: Fall, Spring, Summer.

ENGL 1021 - Core Composition Workshop (1 Credit)
Prepares students for college-level reading and writing. Students receive one-on-one and small-group instruction on analytical and argumentative writing. Max hours: 1 Credit.
Grading Basis: Letter Grade

ENGL 1050 - Vocabulary for Professionals (3 Credits)
Studies English words derived from Latin and Greek by analyzing their component parts (prefixes, stems, and suffixes). Cross-listed with LATN 1050. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

ENGL 1200 - Introduction to Fiction (3 Credits)
Introduces class members to the works of famous authors as well as to major themes, elements, and techniques of fiction in both short stories and novels. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1400 - Literary Studies (3 Credits)
Helps students develop a sense of literary techniques and issues so they can bring an improved critical sensibility to their reading and writing. Note: Designed for students who are seriously interested in literature. Note: this course assumes that students have completed or are currently taking ENGL 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1601 - Storytelling: Literature, Film, and Television (3 Credits)
Asks students to explore how stories determine who we are. Everything people do fits into a narrative pattern, evident everywhere from TV news to memory to daily schedules. We tell ourselves stories about ourselves and others--how do these stories shape who we are as cultural beings? Note: this course assumes that students have completed or are currently taking ENGL 1020. Term offered: fall, spring. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH2, Arts Hum: Lit Humanities.
Typically Offered: Fall, Spring.

ENGL 2030 - Core Composition II (3 Credits)
Focuses on academic and other types of research-based writing and builds on the work completed in ENGL 1020. Focuses on critical thinking, reading and writing as well as working with primary and secondary source material to produce a variety of research-based essays. Emphasis on using both print-based and electronic-based information. Prereq: ENGL 1020 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-C02.
Grading Basis: Letter Grade
Prereq: ENGL 1020 with a C- or higher.
Additional Information: GT courses GT Pathways, GT-CO2, Communication; Denver Core Requirement, English Composition.
Typically Offered: Fall, Spring, Summer.

ENGL 2060 - Introduction to Writing & Digital Studies (3 Credits)
Introduces students to the topics of study in the English Writing major. Topics include writing studies (literacy, genre, research, and multimodality), rhetoric (history and theory), and the teaching of writing (pedagogy and practice). Prereq: ENGL 1020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 1020
Typically Offered: Fall, Spring.

ENGL 2070 - Grammar, Rhetoric and Style (3 Credits)
Teaches the basics of English grammar in order to develop a rhetorical and stylistic confidence in reading and writing, using an approach that is more descriptive than prescriptive. Teaches students how to evaluate the grammatical choices of established writers and how to develop flexibility in the grammatical choices they make in their own writing. Note: this course assumes that students have completed ENGL 1020. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 2156 - Introduction to Creative Writing (3 Credits)
Reading, discussing, writing short fiction and poetry in a workshop setting. Note: this course assumes that students have completed ENGL 1020. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall, Spring, Summer.

ENGL 2250 - Introduction to Film (3 Credits)
Introduces students to the critical study of cinema as an art form and a cultural phenomenon. Topics include cinematography, editing, mise-en-scene and sound; the connections between cinema and related art forms; film genres; the social dimensions of film production and reception; and films by such key filmmakers as Alfred Hitchcock, Maya Deren and Spike Lee. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

ENGL 2300 - Topics in Literature and Film (3 Credits)
Courses supplement the regular program of the department, offering such topics as: literary perceptions of motherhood, Asian-American literature, literary classics of science, and contemporary women writers. Note: Can be taken more than once if topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGL 2390 - Writing the Short Script (3 Credits)
Examines narrative screenwriting elements--premise, theme, conflict, protagonist/antagonist, setting/situation, dialogue, plot structure, imagery--required to create a strong narrative short film. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 2450 - Introduction to Literature and Film (3 Credits)
Provides students with close reading, viewing and analytical skills to explore a variety of literary and visual texts. Introduces discipline-specific genres, methods and terms for assessing literature, cinema, and related art forms through discussion, lectures and writing assignments. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 2510 - Greek and Roman Mythology (3 Credits)
Surveys influential literature from Greece and Rome. Among the Greek works are Homer's epics, Sophocles's tragedies, Plato's and Aristotle's philosophical writings. Among the Roman works are the writings of Vergil, Ovid, the elegists and historians. A brief look at Augustine's writings concludes the course. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 2520 - The Bible as Literature (3 Credits)
Introduces students to biblical literature. Selections from the various genres of writing in Hebrew (history, wisdom, prophecy, literature) are read and discussed, as well as representative sections from the New Testament, including the gospels and the writings of Paul. Cross-listed with RLST 2700. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 2600 - Greatest Hits (3 Credits)
Offers a cultural history of the best-seller over several hundred years, ranging from blockbuster films to popular novels, viral videos, and musical "hits." We will explore popular works in a range of different media, asking how they achieved the status of a best-seller in different cultural settings. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH2, Arts Hum: Lit Humanities.
Typically Offered: Fall, Spring.

ENGL 2840 - Independent Study: ENGL (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring.

ENGL 3001 - Critical Writing (3 Credits)
Introduces literary theory to provide extensive practice in writing about literature. Note: Required of English majors and minors with a literature option and education English majors. Prereq: ENGL 2450 with a C- or higher. Restriction: Restricted to English majors only (all ENGL subplans) and Education and Human Development majors with the English (7-12) subplan. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2450 with a C- or higher. Restriction: Restricted to English majors only (all ENGL subplans) and Education and Human Development majors with the English (7-12) subplan.
Typically Offered: Fall, Spring.

ENGL 3020 - Poetry Workshop (3 Credits)
Practical workshop for developing poetic craft, focusing on writing process and specialized topics. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 3050 - Fiction Workshop (3 Credits)
Beginning workshop for defining and developing narrative craft, focusing on writing process and specialized topics. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 3070 - Studies in Film History (3 Credits)
Examines the history of cinema from a variety of national perspectives. Topics rotate and may include Silent Era Cinema, Classical Hollywood Film, New Hollywood, French New Wave, German Expressionism, etc. Note: May be taken more than once when topics vary. Prereq: Sophomore standing. Cross-listed with HIST 3070. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3075 - Film Genres (3 Credits)
An intensive study of films of one or more significant genres, such as comedy, film noir, science fiction. Prereq: Sophomore standing. Note: May be taken more than once when genres vary. Term offered: fall, spring.
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3080 - Global Cinema (3 Credits)
Studies topics in international cinema, with particular attention to native production in Latin America, Africa, the Middle East, and Asia. Note: May be taken more than once when topics vary. Prereq: Sophomore standing.
Repeatable. Term offered: fall, spring. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3084 - Digital Writing and Storytelling (3 Credits)
Offers students opportunities to examine and compose texts where language is integrated with other media, such as video, still images, music, etc. Includes basic instruction in digital multimedia composition and design tools. ENGL 2070 recommended. Prereq: Junior standing or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 3085 - Film Directors (3 Credits)
An intensive study of the films of one or more major directors, such as Chaplin, Keaton, Hitchcock, Welles, Coen Brothers. Prereq: Sophomore standing. Note: May be taken more than once when directors vary. Term offered: fall, spring. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3106 - Writing for Print Media (3 Credits)
Interested in writing for newspapers, magazines, or new media? Get real-world and practical experience with this introduction to working in modern journalism. Students will work closely with the CU Denver student newspaper "The Sentry", have the chance to get their writing published, and get involved with student media. It's the best way to start writing professionally: with hands-on training. No previous experience necessary--just a passion for journalism and a desire to see your work in print! Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 3154 - Technical Writing (3 Credits)
Introduces students to technical writing through study of and hands-on practice writing texts that communicate complex information, solve problems, and complete tasks. Students write proposals, reports, instructions, memos, documentation, white papers, data visualizations, and web content. Students practice content management, project management, audience engagement, and usability testing. Often, students work with industry and community partners on a technical writing project. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3160 - Language Theory (3 Credits)
Provides a basic introduction to linguistics and language theory, including phonetics, grammar, semantics, pragmatics, sociolinguistics, cognitive processing, and language acquisition. Includes practical applications of the theories and methodologies presented. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3170 - Business Writing (3 Credits)
Focuses on the strategies and techniques of business writing, with emphasis on reader, message and form. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

ENGL 3180 - Writing in the Social Sciences (3 Credits)
Teaches students to analyze and produce types of writing common to the sub-disciplines of the social sciences. Emphasizes the dialogic nature of academic writing, and thus foregrounds the importance of understanding, evaluating, and responding to existing scholarship. Prereq: ENGL 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030

ENGL 3190 - Writing Center Theory & Practice (3 Credits)
An introduction to writing centers and to theories of composition, education, and writing pedagogy with a focus on collaborative learning practices and the dynamics of the consulting relationship. Students will have opportunities to research, observe, and engage in the teaching practices of the Writing Center at CU Denver. Prereq: ENGL 2030 with a B or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a B or higher

ENGL 3200 - From Literature to Film (3 Credits)
Explores the relationship between literature and cinema; the process of adapting and transforming a novel into a feature-length film; and the historical, cultural, and commercial influences that shaped the creation of each novel and film studied. Prereq: Sophomore standing. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Summer.

ENGL 3300 - Topics in Film (3 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy. Prereq: Sophomore standing. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3301 - Topics in Film: Am. Lit (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3302 - Topics in Film: Before 1650 (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy, before 1650. Note: Open to both majors and nonmajors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3303 - Topics in Film: 1650-1900 (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy, from 1650 to 1900. Note: Open to both majors and nonmajors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3330 - Topics in Literature (3 Credits)
Courses supplement the department's regular course offerings. Recent topics have included Tolkien and international short stories. Prereq: Sophomore standing. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Term offered: fall, spring.
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3331 - Topics in Literature: Am Lit (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or works of major authors. Prereq: Sophomore standing or higher.
Repeatable. Term offered: fall, spring. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3332 - Topics in Literature: Before 1650 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors before 1650. Restriction: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3333 - Topics in Literature: 1650-1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors from 1650-1900. Restriction: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3334 - Topics in Literature: After 1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors after 1900, e.g., Lit. of the City, Detective Lit., Science Fiction, Memoir. Prereq: Sophomore standing or higher.
Repeatable. Term offered: fall, spring. Max hours: 15 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3405 - Topics in Writing (3 Credits)
Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

ENGL 3415 - Screenwriting Workshop (3 Credits)
Continues and expands ENGL 2415. The course combines analytical discussion of film screenplays with a writing worksop format. By the end of ENGL 3415, students have completed the first two acts of a feature-length screenplay. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 3416 - Magazine Writing (3 Credits)
An intensive, practical course in writing non-fiction with an emphasis on journalistic approaches for daily, weekly, and monthly publications. Prereq or Coreq: ENGL 2030. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ENGL 2030
Typically Offered: Spring, Summer.

ENGL 3417 - Writing for the Mass Media (3 Credits)
Students will examine public relations writing techniques and journalistic style, public relations theory and ethics, and practical client work. Note: this course assumes that students have completed ENGL 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 3450 - Contemporary Women Writers (3 Credits)
Examines how women write about a specific theme, such as home, work, family, the "Other," as well as how women's writing may differ from men's. Theme and genre vary. Prereq: Sophomore standing. Cross-listed with WGST 3450. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3480 - Modern Drama (3 Credits)
How does drama change from the pioneering realism of Ibsen and Chekhov to the Absurdism of Ionesco and Pinter and beyond? The course covers plays in English and translation from the late nineteenth to the twenty-first century, with attention to performance as well as literary texts. Prereq: Sophomore standing. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 3520 - Religious Narratives (3 Credits)
Investigates the language and structure of religious discourse in Western literature. Welcomes interdisciplinary and comparative perspectives with a focus on cultural constructions of the sacred. Prereq: Sophomore standing. Cross-listed with RLST 3720. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 3661 - Shakespeare (3 Credits)
Introduces some of Shakespeare's major plays and poems, which usually includes Richard II, Romeo and Juliet, Measure for Measure, Othello, King Lear, Anthony and Cleopatra and The Tempest. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3700 - American Literature to the Civil War (3 Credits)
Surveys American literature from the colonial era to the Civil War. Note: this course assumes that students have completed ENGL 1020. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 3750 - American Literature after the Civil War (3 Credits)
Surveys American literature from the Civil War to the contemporary era. Note: this course assumes that students have completed ENGL 1020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 3795 - Race and Ethnicity in American Literature (3 Credits)
Focuses alternately on one of several ethnic American literary traditions (e.g. African American, Chicano) and their historical, geographical, social and economic communities. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

ENGL 3798 - International Perspectives in Literature and Film (3 Credits)
Fosters an understanding of peoples outside of the U.S. through the study and appreciation of non-western literature. Investigates how historical, cultural, and ideological forces constitute race, ethnicity, nationalism, and alienation in a single country or across a region. Topic and country/region varies by semester. Note: May be repeated for credit when title and content are different. All texts in English translation. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

ENGL 3840 - Independent Study: ENGL (1-3 Credits)
Prereq: Sophomore standing. Department consent required. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3939 - Internship (1-6 Credits)
Employment situations designed and supervised by members of the faculty; concepts and skills developed in the classroom are used in business and public service contexts. Prereq: Junior standing or higher. Before enrolling, students should contact the Career Center. Note: Up to six hours may be counted toward the major. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

ENGL 4000 - Studies of Major Authors (3 Credits)
An intensive study of works of one major British or American author. Examples: Dickens, Woolf or James. Prereq: Sophomore standing. Cross-listed with ENGL 5000. Term offered: fall, spring. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4001 - Major Authors: Am. Lit (3-15 Credits)
An intensive study of works of one major American author, e.g. Hawthorne. Faulkner, Cather. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4002 - Major Authors: Before 1650 (3-15 Credits)
An intensive study of works of one major British or American author, before 1650, e.g., Gawain-poet. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4003 - Major Authors: 1650-1900 (3-15 Credits)
An intensive study of works of one major British or American author, between 1650-1900, e.g., Austen, Shelley, Dickens. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4004 - Major Authors: After 1900 (1-15 Credits)
An intensive study of works of one major author, after 1900, e.g. Nobel Laureates, Cather, Joyce. Prereq: sophomore standing or higher. Term offered: fall, spring. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4025 - Advanced Poetry Workshop (3 Credits)
Advanced poetic craft, including exercises in mode, genre and advanced revision. Prereq: ENGL 3020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3020
Typically Offered: Spring.

ENGL 4055 - Advanced Fiction Workshop (3 Credits)
Advanced workshop for developing and deepening narrative craft, focusing on writing process and specialized topics. Prereq: ENGL 3050, English major and minor only; all others must obtain permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3050. Restriction: English majors and minors only.
Typically Offered: Fall, Spring.

ENGL 4088 - Literary Editing: Copper Nickel (3 Credits)
Literary editing in theory and practice, using UCD's nationally recognized journal "Copper Nickel." Topics may include evaluating fiction, poetry and nonfiction; design and aesthetics; line editing; the business of literary journals. Prereq: ENGL 3020 or 3050. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3020 or ENGL 3050
Typically Offered: Spring.

ENGL 4160 - Poetics (3 Credits)
"Mechanics" of poetry in English, including meter, rhythm, rhyme, line, and other systems of measurement and logic. Emphasis is on historical development of poetic art in English. Note: this course assumes that students have completed ENGL 2450. Cross-listed with ENGL 5160. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4166 - History of American Poetry (3 Credits)
Examines major American poets and poetic trends from the colonial period to the present, with attention to cultural contexts and to development of distinctively American practices. Prereq: Sophomore standing. Cross-listed with ENGL 5166. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Teikyo.
Typically Offered: Fall, Spring.

ENGL 4175 - Writing in the Sciences (3 Credits)
Provides rhetorical analyses of scientific discourse and student practice in writing research reports and proposals. Prereq: Sophomore or higher standing and ENGL 2030 with a C- or higher. Cross-listed with ENGL 5175. Students will not receive credit for this class if they have already received credit for ENGL 3175. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a C- or higher Restriction: Restricted to sophomore or higher standing
Typically Offered: Fall, Spring.

ENGL 4177 - Technical Editing (3 Credits)
Provides instruction in the conventions of editing in the genre of technical communication. Students develop skills they can use to edit a variety of technical documents. Prereq: ENGL 2030 with a C- or better. Cross-listed with ENGL 5177. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a C- or higher
Typically Offered: Spring.

ENGL 4180 - Argumentation and Logic (3 Credits)
Explores the history of logic and its role in argumentation, studies various types of logical structures, and analyzes current uses of argumentation, with attention to writing arguments on current public issues. ENGL 3084 recommended. Prereq: Students must have junior standing/60 units of credit completed. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 4190 - Advanced Topics in Writing, Rhetoric, & Linguistics (3 Credits)
Focuses on particular issues in rhetoric and writing as they pertain to reading and writing, including language and gender, language and culture, and language of political action. ENGL 3084 recommended. Prereq: Must have completed 60 semester hours. Cross-listed with ENGL 5190. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 4200 - Survey of the English Novel to 1900 (3 Credits)
Rise and development of the English novel from its beginnings in the 18th century through the end of the 19th century, including such writers as Defore, Fielding, Austen, Shelley, the Brontes, Thackeray, and Dickens. Prereq: Sophomore standing. Cross-listed with ENGL 5200. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4210 - History of the English Novel II (3 Credits)
Overview of the English novel from mid-19th century to World War II, emphasizing the important developments which the form underwent in the hands of notable novelists, including Charles Dickens, the Brontes, George Eliot, Henry James, Joseph Conrad, D.H. Lawrence and Virginia Woolf. Prereq: Sophomore standing. Cross-listed with ENGL 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4220 - African-American Literature (3 Credits)
Surveys African-American literature with special emphasis on post-Civil War writing. Prereq: Sophomore standing. Cross-listed with ENGL 5220, ETST 4220 and ETST 5220. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4230 - The American Novel (3 Credits)
Surveys major developments in the American novel from the 18th century to the 21st century. Prereq: Sophomore standing. Cross-listed with ENGL 5230. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring, Summer.

ENGL 4235 - Faulkner (3 Credits)
Studies the works of Faulkner's high period with special attention to southern themes and Faulkner's experimentation with narrative form. Prereq: Sophomore standing. Cross-listed with ENGL 5235. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4236 - The American Short Story (3 Credits)
Traces the development of the short story in the United States, from its beginnings in colonial tales to its contemporary renaissance as a dominant literary form. Prereq: Sophomore standing. Cross-listed with ENGL 5236. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Teikyo.
Typically Offered: Fall.

ENGL 4240 - Topics in Contemporary American Literature (3 Credits)
Seminar focusing on a segment of contemporary American literature. Prereq: Sophomore standing. Cross-listed with ENGL 5240. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4250 - Twentieth Century Fiction (3 Credits)
Deals with novels originating in a variety of countries in an effort to see the similarities and differences that varying nationalities bring to the genre. Prereq: Sophomore standing. Cross-listed with ENGL 5250. Term offered: spring. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4280 - Proposal and Grant Writing (3 Credits)
Students learn how to find funding sources, write proposals, and manage grants for nonprofit, research, and industry contexts. Students practice the entire process of proposal and grant writing: 1) describing the problem in context; 2) identifying sponsors, building relationships, and finding a match;3) designing, writing, revising, and completing all proposal components; 4)conceptualizing and using persuasive visual and design elements; 5)responding to sponsors and managing grant funds. Often, students work with academic, industry, and community partners on a grant writing project. ENGL 3084 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5280. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ENGL 4290 - Rhetoric and the Body (3 Credits)
Investigates the relationship between rhetoric and the body, with attention to theoretical and practical implications. Welcomes interdisciplinary perspectives, and often considers rhetorical topics from historical, medical, disability studies, economic, and/or gendered perspectives. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 4300 - History of British Drama (3 Credits)
Intended as a survey of British drama from the miracle plays of the medieval period, through the Renaissance and Restoration, to the "kitchen sink" realists of the 1960s. Prereq: Sophomore standing. Cross-listed with ENGL 5300. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 5306, HIST 4306, 5306, WGST 4306, 5306. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 5308, PHIL 4308, PHIL 5308, WGST 4308, WGST 5308. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 4400 - Old English I (3 Credits)
Instruction in the Old English language. Note: this course assumes that students have completed ENGL 2070 or one year of college level coursework in a foreign language. Prereq: Sophomore standing. One year of college foreign language or ENGL 2070 recommended. Cross-listed with ENGL 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4410 - Old English II: Beowulf (3 Credits)
Continuing training in the reading of Old English and intensive reading of Beowulf. Cross-listed with ENGL 5410. Note: this course assumes that students have completed ENGL 4400 or 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 4420 - Film Theory and Criticism (3 Credits)
(1) Familiarizes students with some of the central concepts and debates in film theory and criticism, both classic and contemporary, (2) enables students to develop advanced analytic and interpretive skills, and (3) guides students toward discovering and articulating original critical and theoretical perspectives. Note: this course assumes that students have completed ENGL 2250, ENGL 3070, ENGL 3080. Cross-listed with ENGL 5420. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 4460 - Contemporary World Literature (3 Credits)
Surveys literature written by world writers since World War II. Prereq: Sophomore standing. Note: Texts read in English. Cross-listed with ENGL 5460. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4500 - Medieval Literature (3 Credits)
Introduces representative writers from the Norman Conquest to about 1550. Emphasis on a variety of genres, including religious poetry, Arthurian romance, dream vision and drama. Prereq: Sophomore standing. Cross-listed with ENGL 5500. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4510 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. Note: this course assumes that students have completed at least 9 hours of literature coursework. Cross-listed with ENGL 5510, RLST 4730/5730, WGST 4510/5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 4520 - English Renaissance (3 Credits)
Introduces some of the important writers in this major period of English literature (1500-1660). Special attention to the works of Sidney, Milton, Spenser, Shakespeare, Donne, Herbert and Johnson. Prereq: Sophomore standing. Cross-listed with ENGL 5520. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4530 - Milton (3 Credits)
Extensive reading in John Milton's poetry (Lycidas, Paradise Lost, Paradise Regained, Samson Agonistes) as well as his political, social and theological writings. Prereq: Sophomore standing. Cross-listed with ENGL 5530. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4540 - Restoration and the 18th Century (3 Credits)
Introduces some of the important writers of the "Age of Reason." Emphasis on such figures as Bunyan, Burke, Dryden, Johnson, Pope and Swift. Prereq: Sophomore standing. Cross-listed with ENGL 5540. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4560 - English Romanticism (3 Credits)
Studies major works of the chief English writers of the first part of the 19th century, with emphasis on such representative figures as Wollstonecraft, Godwin, Blake, Wordsworth, Coleridge, Hazlitt, Byron, Keats and Shelley. Prereq: Sophomore standing. Cross-listed with ENGL 5560. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4580 - The Victorian Age (3 Credits)
Examines the main currents of Victorian thought in prose and poetry from about 1830 to the end of the century, including such writers as Browning, Carlyle, Mill, Newman, Ruskin, Swinburne and Tennyson. Prereq: Sophomore standing. Cross-listed with ENGL 5580. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4600 - Modernism (3 Credits)
Modernist literature from the beginning of the 20th century through World War II, including such writers as Eliot, Joyce, Forester, Ford, Yeats, Woolf and Barnes. Examines the social-political influences as well as the aesthetic and stylistic elements which define modernist writing. Prereq: Sophomore standing. Cross-listed with ENGL 5600. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4601 - Teaching English Language Learners: Theory and Practice (3 Credits)
Overview of basic principles and practices in the learning and teaching of English as a second language. ENGL 3160 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5601. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ENGL 4610 - Narrative: Form and Theory (3 Credits)
A critical and theoretical exploration of the elements of narrative -e.g., plot, character, dialogue, discourse-in literature and film. This course is especially useful for fiction-writing students in the Creative Writing Track. Prereq: ENGL 2450. Cross-listed with ENGL 5610. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2450
Typically Offered: Fall.

ENGL 4651 - Second Language Writing (3 Credits)
Topics include: similarities between first & second language writing, the processes of composition & revision, teacher response to student writing, student processing of feedback, writing assessment, and the reading/writing connection. ENGL 3160 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5651. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ENGL 4701 - Multimedia in the Community (3 Credits)
Produce dossier-quality multimedia shorts by researching and writing digital compositions for selected community organizations. Topics for research range across numerous social issues and involve all disciplines. Prereq: ENGL 2030, 3154, and 3170 with a C- or higher or permission of instructor. Cross-listed with ENGL 5701. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030, 3154, and 3170 with a C- or higher.

ENGL 4720 - Honors in English (3 Credits)
Designed for students taking departmental honors in English. Prereq: Students must have written permission from the honors advisor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4730 - Chaucer (3 Credits)
Extensive reading in Chaucer's works in Middle English, including his lyrics, dream visions, Troilus and Criseyde, and the Canterbury Tales. Examines sources, historical and ideological factors influencing the texts. Prereq: Sophomore standing. Cross-listed with ENGL 5730. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4740 - Honors in Writing (3 Credits)
Designed for students taking departmental honors in English writing. Prereq: Student must have written permission from honors director and faculty advisor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4745 - Humanistic Writing About Medicine and Biology (3 Credits)
Investigates medical and biological writing over the last two centuries with an emphasis on reception, ethical issues, and the differences between professional and popular writing. Prereq: Sophomore standing. Cross-listed with ENGL 5745. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4755 - Illness & Disability Narrative (3 Credits)
Narratives of mental, chronic or terminal illness, and disability have become common over the past decades. There are a number of ways in which these stories are told by those reflecting on their experiences: individuals choosing to tell such stories must consider how their stories will be received and what they are revealing about themselves in dealing with their conditions. Many issues arise when looking at the production and reception of these narratives, including acceptation and assimilation, stigmatization, access and quality of treatment, discrimination, accommodation, pity and stereotyping responses. These narratives are consumed, usurped, and reacted to by clinicians, communities and society at large with their own agendas, expectations, fears and judgments of the stories and of the individuals telling their stories. This course is about the issues and concerns of producing an illness or disability narrative and the consumption/reception of those narratives by health professionals, communities, and society at large. Prereq: ENGL 1020 and 2030 with a C or higher. In addition, English majors are required to have taken ENGL 3001, 3084, or 4701, and HEHM minors using this as their capstone are required to have taken HEHM 3100 with a C or higher. Cross-listed with ENGL 5755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req ENGL 1020 and 2030 with a C or higher. In addition, English majors are required to have taken ENGL 3001, 3084, or 4701, and HEHM minors using this as their capstone are required to have taken HEHM 3100 with a C or higher.

ENGL 4770 - Topics in English: Film and Literature (3 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing. Cross-listed with ENGL 5770. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4771 - Topics in English Film and Lit: Film (3 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing or higher. Term offered: fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4772 - Topics in English Film and Lit: Lit (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4773 - Topics in English Film and Lit: Am. Lit (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in American literature and/or film. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 12 Credits
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4774 - Topics in English Film and Lit: Before 1650 (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film before 1650. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4775 - Topics in English Film and Lit: 1650-1900 (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film from 1650-1900. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4776 - Topics in English: Film and Lit: After 1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film after 1900, e.g., Philosophy and Lit., Mental Health in Lit., Environmental Lit. Prereq: Sophomore standing or higher. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.

ENGL 4800 - Special Topics in Creative Writing (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics may include projects in a specialized genre, such as science fiction or noir writing, or in a field of professional endeavor related to creative writing, such as the editing and production of a literary journal. Note: this course assumes that students have completed ENGL 2154. Term offered: fall. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4801 - Special Topics in Creative Writing: Poetry (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics will include projects in poetry. Note: this course assumes that students have completed ENGL 2156. Term offered: fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4802 - Special Topics in Creative Writing: Fiction (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics will include projects in fiction. Note: this course assumes that students have completed ENGL 2154. Term offered: fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4810 - Literary Editing Practicum (3 Credits)
Practicum for students interested in editing in a literary field, e.g., literary magazines, book manuscripts, anthology projects. Each semester the parameter of the practicum will be set by the instructor. Prereq: English majors and minors. All other students must have instructor's permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ENGL majors or minors

ENGL 4820 - Senior Poetry Workshop (3 Credits)
Capstone workshop for students within the Creative Writing major track or Creative Writing minor. Emphasis on a single, sustained project developed by the student. Prereq: ENGL 4025. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 4025
Typically Offered: Spring.

ENGL 4840 - Independent Study: ENGL (1-3 Credits)
Department consent required. Term offered: fall, spring. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring.

ENGL 4850 - Senior Fiction Workshop (3 Credits)
Capstone workshop designed to deepen the understanding of narrative, and consciously apply the strategies of narrative craft to modern markets. Course will focus on the writing and publishing processes, culminating in a classroom narrative defense and submission to professional outlets. Prereq: ENGL 4055. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 4055
Typically Offered: Spring.

ENGL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

ENGL 4920 - Directed Readings (3-6 Credits)
Explores an area of English literature not covered in regular course work. Note: May be taken as a precursor to honors essay, in which case student should consult with the honors advisor. Prereq: Senior standing. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.

ENGL 4990 - Senior Writing Project in Creative Writing or Film Studies (3 Credits)
Individual writing project consisting of a creative manuscript or critical study. Manuscript must be 30 pages of high quality text. Note: Available only to students in the creative writing and film tracks. Prereq: Senior standing. Department consent required. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

ENGL 4995 - Senior Writing Project (3 Credits)
Individual writing project in any genre and any discipline upon approval of faculty advisor. Manuscript must be 30 pages of high quality text. Prereq: Senior standing. Department consent required. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

English - Creative Writing Option, BA

Introduction

Please click here (p. 460) to see English department information.

The course of study offered by the Department of English is designed to develop a student's ability to read literature responsibly and imaginatively, to foster an understanding and appreciation of our literary inheritance, and to provide the historical perspective from which to evaluate contemporary writing and to produce it. Students who complete the program in English are expected to have mastered the ability to express their ideas in creative work.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students planning to major in English must consult with an advisor as soon as possible.
- Students may choose only one of the three options in the English major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 ENGL credit hours.
2. Students must complete a minimum of 27 upper division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 ENGL upper-division (3000-level and above) credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. ENGL 1010 Writing Workshop, ENGL 1020 Core Composition I and ENGL 2030 Core Composition II do not apply to the major.
2. Internship/cooperative education courses may be counted toward the major for students who have completed over 60 credit hours.
3. Double majors in English and English Writing must complete 63 hours total for both majors.
4. The English Department also offers minors in Film Studies, Literature, and English Writing, Rhetoric, and Technology. Courses counted in a minor cannot be counted toward the major.
5. Latin Honors may be earned by participating in the department's Honors Program. You are encouraged to begin the program in your junior year. The program requires additional coursework and affords you the opportunity to work individually with the professor of your choice. Handouts are available in the English office.

Code	Title	Hours
Complete the following required courses:		*15*
ENGL 2450	Introduction to Literature and Film	
ENGL 3020	Poetry Workshop	
ENGL 3050	Fiction Workshop	
ENGL 4025	Advanced Poetry Workshop	
ENGL 4055	Advanced Fiction Workshop	
Choose a creative writing focus and complete the corresponding Poetry or Fiction Track coursework.		*9*

Fiction Track coursework		
ENGL 4610	Narrative: Form and Theory	
ENGL 4850	Senior Fiction Workshop	
ENGL 4200	Survey of the English Novel to 1900	
or ENGL 4220	African-American Literature	
or ENGL 4230	The American Novel	
or ENGL 4236	The American Short Story	
or ENGL 4802	Special Topics in Creative Writing: Fiction	
Poetry Track coursework		
ENGL 4160	Poetics	
ENGL 4820	Senior Poetry Workshop	
ENGL 4166	History of American Poetry	
or ENGL 4801	Special Topics in Creative Writing: Poetry	
Complete an additional five upper division (3000 or 4000-level) ENGL courses.		*15*
The first seven courses below are strongly recommended. However, any upper division ENGL course not already completed for another major requirement can be applied as an elective.		
**Courses with an asterisk may be taken more than once, if the topics/titles differ.*		
ENGL 3001	Critical Writing	
ENGL 3106	Writing for Print Media	
ENGL 3416	Magazine Writing	
ENGL 4800	Special Topics in Creative Writing (*)	
ENGL 4801	Special Topics in Creative Writing: Poetry (*)	
ENGL 4802	Special Topics in Creative Writing: Fiction (*)	
ENGL 4810	Literary Editing Practicum	
ENGL 3070	Studies in Film History (*)	
ENGL 3075	Film Genres (*)	
ENGL 3080	Global Cinema (*)	
ENGL 3085	Film Directors (*)	
ENGL 3300	Topics in Film (*)	
ENGL 3330	Topics in Literature (*)	
ENGL 3331	Topics in Literature: Am Lit (*)	
ENGL 3332	Topics in Literature: Before 1650 (*)	
ENGL 3333	Topics in Literature: 1650-1900 (*)	
ENGL 3334	Topics in Literature: After 1900 (*)	
ENGL 3405	Topics in Writing (*)	
ENGL 4000	Studies of Major Authors (*)	
ENGL 4001	Major Authors: Am. Lit (*)	
ENGL 4002	Major Authors: Before 1650 (*)	
ENGL 4003	Major Authors: 1650-1900 (*)	
ENGL 4004	Major Authors: After 1900 (*)	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (*)	
ENGL 4770	Topics in English: Film and Literature (*)	
ENGL 4771	Topics in English Film and Lit: Film (*)	
ENGL 4772	Topics in English Film and Lit: Lit (*)	
ENGL 4773	Topics in English Film and Lit: Am. Lit (*)	
ENGL 4774	Topics in English Film and Lit: Before 1650 (*)	
ENGL 4775	Topics in English Film and Lit: 1650-1900 (*)	
ENGL 4776	Topics in English: Film and Lit: After 1900 (*)	
Total Hours		**39**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-creative-writing/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

English - Film Studies Option, BA

Introduction

Please click here (p. 460) to see English department information.

The film studies option within the English major is designed to prepare students for a range of professional careers in areas such as film criticism, video production, and the teaching of film, as well as graduate programs in film studies.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students planning to major in English must consult with an advisor as soon as possible.
- Students may choose only one of the three options in the English major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 ENGL credit hours.
2. Students must complete a minimum of 27 upper-division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 ENGL upper-division (3000-level or above) credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. ENGL 1010 Writing Workshop, ENGL 1020 Core Composition I, and ENGL 2030 Core Composition II are not included in the major.
2. Internship/cooperative education courses may be counted toward the major for students who have junior standing or higher.
3. Double majors in English and English Writing, Rhetoric, and Technology must complete 63 hours total for both majors.
4. The English Department also offers minors in Creative Writing, Literature, and English Writing, Rhetoric, and Technology. Courses counted in a minor cannot be counted toward the major.
5. Latin Honors may be earned by participating in the department's Honors Program. You are encouraged to begin the program in your junior year. The program requires additional coursework and affords you the opportunity to work individually with the professor of your choice. Handouts are available in the English office.
6. *Courses marked with an asterisk are repeatable if taken as a different genre/director/topic.

Code	Title	Hours
Complete all of the following film studies courses:		*15*
ENGL 2450	Introduction to Literature and Film	
ENGL 3070	Studies in Film History (*)	
ENGL 3080	Global Cinema (*)	
ENGL 3200	From Literature to Film	
ENGL 4420	Film Theory and Criticism (students should complete 3070 and 3080 prior to enrolling in 4420)	
Complete a minimum of eight of the following critical studies elective courses:		*24*
**Repeatable if a different genre/director/topic.*		
ENGL 1601	Storytelling: Literature, Film, and Television	
ENGL 2390	Writing the Short Script	
ENGL 2600	Greatest Hits	
ENGL 3001	Critical Writing	
ENGL 3070	Studies in Film History (*)	
ENGL 3075	Film Genres (*)	
ENGL 3080	Global Cinema (*)	
ENGL 3085	Film Directors (*)	
ENGL 3300	Topics in Film (*)	
ENGL 3450	Contemporary Women Writers	
ENGL 3520	Religious Narratives	
ENGL 3661	Shakespeare	
ENGL 3700	American Literature to the Civil War	
ENGL 3750	American Literature after the Civil War	
ENGL 3795	Race and Ethnicity in American Literature	
ENGL 3798	International Perspectives in Literature and Film	
ENGL 4000	Studies of Major Authors (*)	
ENGL 4001	Major Authors: Am. Lit (*)	
ENGL 4002	Major Authors: Before 1650 (*)	
ENGL 4003	Major Authors: 1650-1900 (*)	
ENGL 4004	Major Authors: After 1900 (*)	
ENGL 4160	Poetics	
ENGL 4166	History of American Poetry	
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4220	African-American Literature	
ENGL 4230	The American Novel	
ENGL 4235	Faulkner	
ENGL 4236	The American Short Story	
ENGL 4250	Twentieth Century Fiction	
ENGL 4306	Survey of Feminist Thought	
ENGL 4308	Contemporary Feminist Thought	
ENGL 4460	Contemporary World Literature	

ENGL 4500	Medieval Literature
ENGL 4510	Whores and Saints: Medieval Women
ENGL 4520	English Renaissance
ENGL 4530	Milton
ENGL 4540	Restoration and the 18th Century
ENGL 4560	English Romanticism
ENGL 4580	The Victorian Age
ENGL 4600	Modernism
ENGL 4730	Chaucer
ENGL 4745	Humanistic Writing About Medicine and Biology
ENGL 4755	Illness & Disability Narrative
ENGL 4770	Topics in English: Film and Literature (*)
ENGL 4771	Topics in English Film and Lit: Film (*)
ENGL 4772	Topics in English Film and Lit: Lit (*)
ENGL 4773	Topics in English Film and Lit: Am. Lit (*)
ENGL 4774	Topics in English Film and Lit: Before 1650 (*)
ENGL 4775	Topics in English Film and Lit: 1650-1900 (*)
ENGL 4776	Topics in English: Film and Lit: After 1900 (*)
ENGL 4990	Senior Writing Project in Creative Writing or Film Studies
Total Hours	**39**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-film-studies/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

English - Literature Option, BA

Introduction

Please click here (p. 460) to see English department information.

The course of study offered by the Department of English is designed to develop a student's ability to read literature responsibly and imaginatively, to foster an understanding and appreciation of our literary inheritance, and to provide the historical perspective from which to evaluate contemporary writing. Careful study of the use of the English language also should help a student to resist the misuse and corruption of language in politics, the media, and elsewhere. Students who complete the program in English are expected to have mastered the ability to express their ideas in clear and succinct prose.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students planning to major in English must consult with an advisor as soon as possible.
- Students may choose only one of the three options in the English major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 ENGL credit hours.
2. Students must complete a minimum of 27 upper-division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 ENGL upper-division (3000-level and above) credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. ENGL 1010 Writing Workshop, ENGL 1020 Core Composition I, and ENGL 2030 Core Composition II are not included in the major.
2. Internship/cooperative education courses may be counted toward the major for students who have completed over 60 credit hours.
3. Double majors in English and English Writing must complete a minimum of 63 hours total for both majors.
4. The English Department also offers minors in Creative Writing, Film, and English Writing, Rhetoric, and Technology. Courses counted in a minor cannot be counted toward the major.
5. Latin Honors may be earned by participating in the department's Honors Program. You are encouraged to begin the program in your junior year. The program requires additional coursework and affords you the opportunity to work individually with the professor of your choice. Handouts are available in the English office.
6. Any of the following courses can be taken more than once, if the topic/title differs:

    - Any film or film theory courses (e.g., ENGL 3070 Film History I, ENGL 3080 Global Cinema, ENGL 3085 Film Directors, ENGL 3075 Film Genres, etc.)
    - Any ENGL 3330, ENGL 3331, ENGL 3332, ENGL 3333, and/or ENGL 3334 topics courses (e.g., Lit. of the City, Detective Lit., Science Fiction, Memoir)
    - Any ENGL 4770, ENGL 4771, ENGL 4772, ENGL 4773, ENGL 4774, ENGL 4775, and/or ENGL 4776 topics courses (e.g., Philosophy and Lit., Mental Health in Lit., Environmental Lit.)
    - Any ENGL 4000, ENGL 4001, ENGL 4002, ENGL 4003, and/or ENGL 4004 Studies of Major Authors courses (e.g., Nobel Laureates, Cather, Joyce)
    - Any women's lit. and/or feminist theory topics course
    - Any ENGL ethnic lit. topics course
    - Any ENGL identity topics course (e.g. LQBT Lit., Queer Theory)

Code	Title	Hours
Complete the following required Literature courses:		*9*
ENGL 1601	Storytelling: Literature, Film, and Television	
or ENGL 260	Greatest Hits	
ENGL 2450	Introduction to Literature and Film	
ENGL 3001	Critical Writing	
Complete one American Literature course:		*3*
American Literature (p. 476)		
Complete two courses from each of the following time periods:		*12*
Before 1650 (p. 477)		
1650-1900 (p. 477)		
Complete three Modern Literature and Culture courses:		*9*
Modern Literature and Culture (p. 477)		
Complete an additional two ENGL courses/ six elective credit hours at any level.		*6*
Total Hours		**39**

American Literature

Code	Title	Hours
Complete one of the following American Literature courses:		*3*
ENGL 3331	Topics in Literature: Am Lit	
ENGL 3700	American Literature to the Civil War	
ENGL 3750	American Literature after the Civil War	

ENGL 3795	Race and Ethnicity in American Literature
ENGL 4001	Major Authors: Am. Lit
ENGL 4166	History of American Poetry
ENGL 4220	African-American Literature
ENGL 4230	The American Novel
ENGL 4236	The American Short Story
ENGL 4773	Topics in English Film and Lit: Am. Lit

Before 1650

Code	Title	Hours
Complete two of the following before 1650 courses:		*6*
ENGL 3332	Topics in Literature: Before 1650	
ENGL 3661	Shakespeare	
ENGL 4002	Major Authors: Before 1650	
ENGL 4500	Medieval Literature	
ENGL 4510	Whores and Saints: Medieval Women	
ENGL 4520	English Renaissance	
ENGL 4730	Chaucer	
ENGL 4774	Topics in English Film and Lit: Before 1650	

1650-1900

Code	Title	Hours
Complete two of the following 1650-1900 courses:		*6*
ENGL 3333	Topics in Literature: 1650-1900	
ENGL 3700	American Literature to the Civil War	
ENGL 4003	Major Authors: 1650-1900	
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4530	Milton	
ENGL 4540	Restoration and the 18th Century	
ENGL 4560	English Romanticism	
ENGL 4580	The Victorian Age	
ENGL 4775	Topics in English Film and Lit: 1650-1900	

Modern Literature and Culture

Code	Title	Hours
Complete three of the following Modern Literature and Culture courses:		*9*
ENGL 3334	Topics in Literature: After 1900	
ENGL 3450	Contemporary Women Writers	
ENGL 3750	American Literature after the Civil War	
ENGL 4004	Major Authors: After 1900	
ENGL 4220	African-American Literature	
ENGL 4250	Twentieth Century Fiction	
ENGL 4306	Survey of Feminist Thought	
ENGL 4308	Contemporary Feminist Thought	
ENGL 4460	Contemporary World Literature	
ENGL 4600	Modernism	
ENGL 4776	Topics in English: Film and Lit: After 1900	
Any ENGL ethnic lit. topics course		
Any ENGL identity topics course (e.g. LQBT Lit., Queer Theory)		

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-literature/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

English Writing, Rhetoric, and Technology, BA

Introduction

Please click here (p. 460) to see English department information.

The English Writing, Rhetoric and Technology major asks students to take one of two introductory courses, a multi-media course (two course options), a language theory/sociolinguistics course (three course option), and two advanced topics courses (with a range of options). The remainder of the degree is seven courses chosen from a long list, which can include two courses outside the English Writing focus (such as creative writing workshops, film courses, or courses in related majors). For all the details, please review the advising sheets for the English Writing, Rhetoric, and Technology major. Especially designed for future writers, the major offers a wide range of intensive writing experiences, combining such areas as rhetoric, and professional, general, and creative writing.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This program offers courses both on-campus and online. You can take the English Writing, Rhetoric, and Technology Major fully online or fully on campus. Most of our students, however, end up taking a mix of online and on-campus courses in order to juggle changing work schedules and busy lives. You can decide what's best for you.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students planning to major in English Writing, Rhetoric, and Technology must consult with an advisor as soon as possible.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 ENGL credit hours toward the major.
2. Students must complete a minimum of 27 upper division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 ENGL upper division (3000-level and above) credits hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. ENGL 1010 Writing Workshop, ENGL 1020 Core Composition I and ENGL 2030 Core Composition II do not count toward the major, nor does CLEP or AP credit.
2. Double majors in English Writing, Rhetoric and Technology and English are required to complete a minimum of 63 ENGL credit hours.
3. A maximum of six credit hours of Internship/cooperative education courses may be counted toward the major for students who have completed 60 or more credit hours. Internships count as upper-division electives.
4. The English Department also offers minors in Creative Writing, Film Studies, and Literature. Courses counted in a minor cannot be counted toward the major.
5. Latin Honors may be earned by participating in the department's Honors Program. You are encouraged to begin the program in your junior year. The program requires additional coursework and affords you the opportunity to work individually with the professor of your choice. Handouts are available in the English office.
6. Courses may not be used more than once between the Required Course Area and Electives.

Code	Title	Hours
Complete the following required foundations courses:		*9*
ENGL 2060	Introduction to Writing & Digital Studies	
ENGL 2070	Grammar, Rhetoric and Style	
ENGL 3084	Digital Writing and Storytelling	
Complete one of the following language study courses:		*3*
ENGL 3160	Language Theory	
ENGL 4601	Teaching English Language Learners: Theory and Practice (with instructor's permission)	
ENGL 4651	Second Language Writing (with instructor's permission)	
Complete six credits of advanced writing experience courses, with different topics:		*6*
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
Complete a minimum of six of the following Writing, Rhetoric, and Technology elective courses-we highly recommend students pursue a certificate as they fulfill electives: [1]		*18*
*Courses with an asterisk can be taken more than once, if the topic/ title differs.		
ENGL 2060	Introduction to Writing & Digital Studies	
ENGL 2070	Grammar, Rhetoric and Style	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3154	Technical Writing	
ENGL 3160	Language Theory	
ENGL 3170	Business Writing	
ENGL 3405	Topics in Writing	
ENGL 3415	Screenwriting Workshop	
ENGL 3416	Magazine Writing	
ENGL 3939	Internship	

ENGL 4175	Writing in the Sciences
ENGL 4177	Technical Editing
ENGL 4180	Argumentation and Logic
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics
ENGL 4280	Proposal and Grant Writing
ENGL 4601	Teaching English Language Learners: Theory and Practice (by instructor's permission)
ENGL 4651	Second Language Writing (by instructor's permission)
ENGL 4701	Multimedia in the Community
ENGL 4740	Honors in Writing
ENGL 4995	Senior Writing Project
Total Hours	**36**

[1] A course applied as a required course will not also apply as an elective. Each course will only apply to one area, except for ENGL 4190 Advanced Topics in Writing, Rhetoric, & Linguistics. The topic for each section of ENGL 4190 Advanced Topics in Writing, Rhetoric, & Linguistics must be different, in order for repeat credits to apply. Six credits of ENGL 4190 Advanced Topics in Writing, Rhetoric, & Linguistics are required and three additional elective credits can be taken and applied, for a maximum of nine credits that can apply to the degree.

Students may complete up to four ENGL courses that are either 3000- or 4000-level that are not on this list (such as creative writing workshops, film courses, or literature courses), or up to two writing courses in other departments (prior approval from an advisor required for courses outside of English), toward the 18 elective credits.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-writing-rhetoric-technology-major/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

English, BA with Secondary Teaching Licensure Endorsement

Introduction

Please click here (p. 460) to see English department information.

The secondary licensure program is a partnership program between the College of Liberal Arts and Sciences (CLAS) and the School of Education & Human Development (SEHD). Secondary Education Licensure students choose a major within CLAS and complete all CORE, CLAS, major, and initial teacher education admission requirements before completing a final professional year of licensure coursework through the SEHD.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor, CLAS advisor and SEHD advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 42 ENGL credit hours. Up to 15 of those credit hours can also be counted toward the CU Denver Core and CLAS Graduation Requirements.
2. Students must complete a minimum of 27 upper division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 ENGL upper-division (3000-level and above) credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

Students are responsible for meeting with the advisor in the SEHD to confirm teacher education and licensure requirements. In addition to completing all minimum program requirements above, SEHD secondary education students must complete the following minimum SEHD licensure (p. 927) requirements:

1. Complete the Education Declaration form and all subsequent processes and requirements, including a background check, prior to April 1st (for students intending to complete their clinical field experience in fall) or November 1st (for students intending to complete their clinical field experience in spring). Students must meet with the SEHD advisor for detailed information.
2. Student pursuing secondary education licensure must complete the following requirements to be admitted to the Professional (final) Year:
   a. a minimum cumulative CU GPA of 3.0 or higher. Students with a lower GPA may be considered under certain conditions.
   b. all CU Denver Core, CLAS, major, electives, and initial teacher education coursework requirements prior to the start of the Professional Year
   c. the official application and interview process
   d. Deadlines for Professional Year application are February 15th (for students intending to begin Professional Year in fall) or October 1st (for students intending to begin Professional Year in spring).
3. Students must complete all initial teacher education and professional (final) year coursework with a minimum grade of B- or higher.
4. ENGL 1010, 1020, and 2030 are not included in the major.

Code	Title	Hours
Complete the following required courses:		*21*
ENGL 2070	Grammar, Rhetoric and Style	
ENGL 2450	Introduction to Literature and Film	
ENGL 2600	Greatest Hits	
ENGL 3001	Critical Writing	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3661	Shakespeare	
ENGL 3795	Race and Ethnicity in American Literature	
Complete three of the following American, British and Contemporary Literature Courses (one course in each category):		*9*
ENGL 3700	American Literature to the Civil War	
ENGL 3750	American Literature after the Civil War	
ENGL 4166	History of American Poetry	
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4230	The American Novel	
ENGL 4250	Twentieth Century Fiction	
ENGL 4460	Contemporary World Literature	
ENGL 4600	Modernism	
Complete the following creative writing course:		*3*
ENGL 2156	Introduction to Creative Writing	
Complete the following language development course:		*3*
ENGL 3160	Language Theory	
Complete one of the following media/language acquisition courses:		*3*
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
ENGL 4601	Teaching English Language Learners: Theory and Practice	
Complete one of the following upper-division literature courses:		*3*
ENGL 4000	Studies of Major Authors	
ENGL 4001	Major Authors: Am. Lit	
ENGL 4002	Major Authors: Before 1650	
ENGL 4003	Major Authors: 1650-1900	
ENGL 4004	Major Authors: After 1900	
ENGL 4236	The American Short Story	

ENGL 4500	Medieval Literature	
ENGL 4520	English Renaissance	
ENGL 4560	English Romanticism	
ENGL 4580	The Victorian Age	
Total Hours		**42**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-creative-writing/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Creative Writing Minor

Introduction

Please click here (p. 460) to see English department information.

Students who have an interest in writing poetry or fiction may enroll in the creative writing minor. The creative writing minor gives students the opportunity to complement their area of major study with experience writing and reading poetry or fiction.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ENGL credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine ENGL credit hours with CU Denver faculty.

Program Allowances or Restrictions

1. Courses counted in a minor cannot be counted toward any English Major or English Writing, Rhetoric, and Technology Major.

Code	Title	Hours
Complete the following required courses:		*9*
ENGL 2156	Introduction to Creative Writing	
ENGL 2450	Introduction to Literature and Film	
ENGL 3020	Poetry Workshop	
or ENGL 3050	Fiction Workshop	
Complete one of the following elective courses: [1]		*3*
ENGL 3020	Poetry Workshop	
or ENGL 3050	Fiction Workshop	
ENGL 4025	Advanced Poetry Workshop	
ENGL 4055	Advanced Fiction Workshop	
Complete one additional Poetry or Fiction elective course. [2]		*3*
Students who have completed ENGL 3020, complete one of the following Poetry courses:		
ENGL 4160	Poetics	
ENGL 4166	History of American Poetry	
ENGL 4801	Special Topics in Creative Writing: Poetry	
Students who have completed ENGL 3050, complete one of the following Fiction courses:		
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4230	The American Novel	
ENGL 4236	The American Short Story	

ENGL 4802	Special Topics in Creative Writing: Fiction	
Total Hours		**15**

1 Students may complete both ENGL 3020 Poetry Workshop and ENGL 3050 Fiction Workshop. One will apply as a required course and one will apply as an elective.

2 Students who complete both ENGL 3020 Poetry Workshop and ENGL 3050 Fiction Workshop can choose an additional Poetry or Fiction elective course.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/creative-writing-minor/).

English Writing, Rhetoric, and Technology Minor

Introduction

Please click here (p. 460) to see English department information.

The English Writing, Rhetoric, and Technology minor allows students to complement their area of major study with systematic experience in writing.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This program is both an on-campus and online program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ENGL credit hours.
2. Students must complete a minimum of six ENGL upper-division (3000-level and above) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete a minimum of nine ENGL credit hours with CU Denver English faculty.

Program Restrictions, Allowances and Recommendations

1. ENGL 1020 Core Composition I and ENGL 2030 Core Composition II do not count toward the minor, nor does CLEP or AP credit.
2. Internships are available for students who have completed over 60 credit hours and count toward the upper-division elective in the minor. Visit CU Denver's Experiential Learning Center (ELC) for more information (Tivoli 260). A faculty sponsor is required for all internships.
3. Students are encouraged to take ENGL 1020 Core Composition I and ENGL 2030 Core Composition II before beginning the minor.
4. Courses counted in a minor cannot be counted toward any English Major.

Code	Title	Hours
Complete the following required courses:		*12*
Introduction to Writing and Rhetoric (should be completed when you begin the minor)		
ENGL 2060	Introduction to Writing & Digital Studies	
or ENGL 2070	Grammar, Rhetoric and Style	
Multimedia		
ENGL 3084	Digital Writing and Storytelling	
or ENGL 4701	Multimedia in the Community	
Language Study		
ENGL 3160	Language Theory	
or ENGL 4601	Teaching English Language Learners: Theory and Practice	
or ENGL 4651	Second Language Writing	
Advanced Writing Experience		
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
Complete one of the following Writing, Rhetoric, and Digital Studies elective courses: [1]		*3*
*Courses with an asterisk can be taken more than once, if the topic/title differs.		
ENGL 2060	Introduction to Writing & Digital Studies	

ENGL 2070	Grammar, Rhetoric and Style
ENGL 3084	Digital Writing and Storytelling
ENGL 3154	Technical Writing
ENGL 3160	Language Theory
ENGL 3170	Business Writing
ENGL 3405	Topics in Writing
ENGL 3415	Screenwriting Workshop
ENGL 3416	Magazine Writing
ENGL 3939	Internship
ENGL 4175	Writing in the Sciences
ENGL 4177	Technical Editing
ENGL 4180	Argumentation and Logic
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (*)
ENGL 4280	Proposal and Grant Writing
ENGL 4601	Teaching English Language Learners: Theory and Practice (with instructor's permission)
ENGL 4651	Second Language Writing (with instructor's permission)
ENGL 4701	Multimedia in the Community
ENGL 4740	Honors in Writing
ENGL 4995	Senior Writing Project
Total Hours	**15**

[1] A course applied as a required course will not also apply as an elective. Each course will only apply to one area.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/english-writing-rhetoric-and-technology-minor/).

Film Studies Minor

Introduction

Please click here (p. 460) to see English department information.

The film studies minor offers students the opportunity to gain an informed understanding of the sophisticated medium of film, its language and history. Courses cover critical writing about cinema, creative screenwriting, the evolution of Hollywood movies, international cinema, and film in its cultural context. The film studies minor makes a valuable complement to a range of undergraduate majors.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ENGL credit hours for the film studies minor.
2. Students must complete a minimum of six upper-division (3000-level and above) ENGL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine ENGL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students are strongly advised to take ENGL 2450 Introduction to Literature and Film before taking other film courses.
2. Students are advised to fulfill the liberal arts and sciences core curriculum writing requirements (ENGL 1020 Core Composition I & ENGL 2030 Core Composition II) before enrolling in upper-division topics in film courses.
3. No more than two online film studies courses can be counted toward the minor.
4. Courses in a minor cannot be counted toward the English major or English Writing, Rhetoric and Technology major; consult an English advisor for substitutions.

Code	Title	Hours
Complete the following required courses:		*9*
ENGL 2450	Introduction to Literature and Film	
ENGL 3070	Studies in Film History (*)	
ENGL 3080	Global Cinema (*)	
*Complete two additional courses from the list below. *Courses are repeatable if taken as a different genre/director/topic:*		*6*
ENGL 3070	Studies in Film History (*)	
ENGL 3075	Film Genres (*)	
ENGL 3080	Global Cinema (*)	
ENGL 3085	Film Directors (*)	
ENGL 3200	From Literature to Film	
ENGL 3300	Topics in Film (*)	
ENGL 4420	Film Theory and Criticism	
ENGL 4001	Major Authors: Am. Lit	
ENGL 4002	Major Authors: Before 1650	
ENGL 4003	Major Authors: 1650-1900	
ENGL 4004	Major Authors: After 1900	
ENGL 4771	Topics in English Film and Lit: Film (*)	
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/film-studies-minor/).

Literature Minor

Introduction

Please click here (p. 460) to see English department information.

This program is designed for students who are interested in the study of English literature but who have elected to major in another area. The recommended series of courses allows students to become acquainted with some of the methods of literary study and with a number of the most important literary works. The literature minor allows students to complement their area of major study with systematic experience in literature.

These degree requirements are subject to periodic revision by the academic department, and the College reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and their CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ENGL credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) ENGL credit hours at CU Denver.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.

Program Restrictions, Allowances and Recommendations

1. Courses in a minor cannot be counted toward the English major or English Writing, Rhetoric and Technology major.
2. Course requirements may not be met by independent study.

Note: Students are advised to fulfill the liberal arts and sciences core curriculum writing requirements (ENGL 1020 Core Composition I & ENGL 2030 Core Composition II) before enrolling in upper-division literature courses.

Literature Minor Requirements

Code	Title	Hours
Required Course		
Complete the following course		
ENGL 2450	Introduction to Literature and Film	3
Literature/Film Courses		
Complete 12 ENGL Literature/Film credits from the list below:		*12*
Three credits may be taken at any level, nine credits must be upper-division (3000-level and above).		
(*) Courses are repeatable if taken as a different genre/author/topic.		
ENGL 1601	Storytelling: Literature, Film, and Television	
ENGL 2250	Introduction to Film	
ENGL 2510	Greek and Roman Mythology	
ENGL 2520	The Bible as Literature	
ENGL 2600	Greatest Hits	
ENGL 3001	Critical Writing	
ENGL 3070	Studies in Film History (*)	
ENGL 3075	Film Genres (*)	
ENGL 3080	Global Cinema (*)	
ENGL 3085	Film Directors (*)	
ENGL 3200	From Literature to Film	
ENGL 3300	Topics in Film (*)	
ENGL 3330	Topics in Literature (*)	
ENGL 3331	Topics in Literature: Am Lit (*)	
ENGL 3332	Topics in Literature: Before 1650 (*)	
ENGL 3333	Topics in Literature: 1650-1900 (*)	
ENGL 3334	Topics in Literature: After 1900 (*)	
ENGL 3450	Contemporary Women Writers	
ENGL 3520	Religious Narratives	
ENGL 3661	Shakespeare	
ENGL 3700	American Literature to the Civil War	
ENGL 3750	American Literature after the Civil War	
ENGL 3795	Race and Ethnicity in American Literature	
ENGL 3798	International Perspectives in Literature and Film	
ENGL 3939	Internship	
ENGL 4000	Studies of Major Authors (*)	
ENGL 4001	Major Authors: Am. Lit (*)	
ENGL 4002	Major Authors: Before 1650 (*)	
ENGL 4003	Major Authors: 1650-1900 (*)	
ENGL 4004	Major Authors: After 1900 (*)	
ENGL 4160	Poetics	
ENGL 4166	History of American Poetry	
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4220	African-American Literature	
ENGL 4230	The American Novel	
ENGL 4235	Faulkner	
ENGL 4236	The American Short Story	
ENGL 4250	Twentieth Century Fiction	
ENGL 4420	Film Theory and Criticism	
ENGL 4460	Contemporary World Literature	
ENGL 4500	Medieval Literature	
ENGL 4510	Whores and Saints: Medieval Women	

ENGL 4520	English Renaissance
ENGL 4530	Milton
ENGL 4540	Restoration and the 18th Century
ENGL 4560	English Romanticism
ENGL 4580	The Victorian Age
ENGL 4600	Modernism
ENGL 4730	Chaucer
ENGL 4745	Humanistic Writing About Medicine and Biology
ENGL 4770	Topics in English: Film and Literature (*)
ENGL 4771	Topics in English Film and Lit: Film (*)
ENGL 4772	Topics in English Film and Lit: Lit (*)
ENGL 4773	Topics in English Film and Lit: Am. Lit (*)
ENGL 4774	Topics in English Film and Lit: Before 1650 (*)
ENGL 4775	Topics in English Film and Lit: 1650-1900 (*)
ENGL 4776	Topics in English: Film and Lit: After 1900 (*)
Total Hours	**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/english/literature-minor/).

Proposal and Grant Writing Undergraduate Certificate

Introduction

The Proposal and Grant Writing certificate program is an opportunity for students to pursue formal study of grant development and proposal writing and to gain professional experience writing proposals and managing grants (through an internship pipeline and experiential/client-partnered courses). Students learn about and gain experience in all stages of the grant development process, including researching funding opportunities, building relationships with funders, managing complex grant proposals and teams, writing and designing proposals, and managing grant funds, work plans, outcomes assessments, and relationships.

Grant writing professionals are in demand and possess a specific set of skills—these factors make proposal and grant writing particularly amenable to certificate programming. Students who earn this certificate will gain a specific set of discrete and hands-on skills that translate into a range of workplace roles and skills.

Program Delivery

- The certificate can be completed through online, in-person, or hybrid courses.

Declaring This Certificate

- Please contact the certificate faculty advisor.

For questions about the Proposal and Grant Writing certificate program contact Dr. Kari Campeau (kari.campeau@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Proposal and Grant Writing advisor to confirm the best plans of study before finalizing them.

Program Requirements

1. Students must complete a minimum of 12 ENGL credit hours.
2. Students must complete a minimum of nine upper-division (3000-level or higher) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All credits for the certificate must be completed with CU Denver faculty.

Code	Title	Hours
Complete the following foundational course:		*3*
ENGL 4280	Proposal and Grant Writing	
Complete three credit hours from the following professional writing elective courses. All professional writing elective courses include content and assignments that address different aspects of proposal and grant writing.		*3*
ENGL 3170	Business Writing	
	This course is most useful to students with career interests in business and nonprofits.	
ENGL 3939	Internship	
	This elective is broadly applicable, as it provides the most direct experience in grant writing. It should appeal especially to students interested in working in research careers as well as students who want to pursue grant writing as a career path.	
	Students work on faculty members' grant writing teams and with ORS to build a grant repository for CU Denver.	
ENGL 4088	Literary Editing: Copper Nickel	
	This course is most useful to students with career interests in the creative arts and publishing. Students who take Literary Editing and complete the Proposal and Grant Writing certificate will gain professional experience editing a national literary journal and composing and writing competitive grant proposals.	
ENGL 4175	Writing in the Sciences	
	This course is most useful to students pursuing the certificate with career interests in academia, science, medicine, and/or healthcare.	
Complete six elective credits approved by the certificate director.		*6*
Electives may be drawn from the professional electives or from courses selected in consultation with the certificate advisor. Electives should support students to gain experience in the fields that they want to pursue. For example, students who are interested in writing scientific research proposals might take courses in related science disciplines. Students who are interested in using grant writing skills in a nonprofit context would be encouraged to take courses in nonprofit and business management		
Total Hours		**12**

By completing this certificate, students will be able to:

- Identify fundable problems in specific contexts
- Research funding opportunities and find funding matches for specific projects
- Understand the importance of building funding relationships
- Design, write, revise, and complete a grant proposal
- Conceptualize and use persuasive visual and design elements when compositing a proposal
- Respond to sponsors and manage grant funds
- Conceptualize and explain the role that proposal and grant writing will fit in their careers

Teaching English Language Learners Undergraduate Certificate (CTELL)

Introduction

Please click here (p. 460) to see English department information.

The Certificate in Teaching English Language Learners (CTELL) is designed to help you gain the skills necessary to teach English Language Learners at a variety of levels. It is built to serve those who want to teach in multilingual public and private schools in America as well as those who plan to teach English overseas. This certificate also serves the needs of international students wanting to teach English in their home country or other countries.

The program, which can be completed through CU Online, is designed to build the necessary skills to teach adults English as a second language. It is primarily aimed at native speakers of English who want to teach overseas but may serve the needs of international students wanting to teach English in their home country or other countries. Opportunities exist for internships at CU Denver's ESL Academy, International College of Beijing (ICB) and other language schools.

Upon successful completion of the program, CTELL graduates will be able to:

- discuss the theoretical basis of English language instruction
- demonstrate a variety of effective English language teaching techniques
- explain, in pedagogically relevant ways, the linguistic structures of the English language

When can I start?

You may begin in any semester. There is no fixed deadline for application for admission.

Program Delivery

- This is an online program.

Declaring This Certificate

- Please contact the certificate faculty advisor.

For questions about the Teaching English Language Learners (CTELL) certificate program contact Joanne Addison (joanne.addison@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Teaching English Language Learners (CTELL) advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outline below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 ENGL credit hours.
2. Students must complete a minimum of 12 upper-division (3000- level or higher) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All credits for the certificate must be completed with CU Denver faculty.

Program Allowances or Restrictions

1. The same courses counted toward a minor or degree at CU Denver may also be used toward the requirements for a certificate.

Code	Title	Hours
Complete all of the following required courses:		*9*
ENGL 3160	Language Theory	
ENGL 4601	Teaching English Language Learners: Theory and Practice	
ENGL 4651	Second Language Writing	
Complete six elective credits from the following courses:		*6*
ENGL 3939	Internship	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
ENGL 5093	Teaching of Writing	
LING 3100	Language in Society	
Alternative elective approved by program advisor.		
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website.

Technical and Professional Writing Undergraduate Certificate

Introduction

Technical writers analyze audiences, visualize data, manage content, write reports, design apps and user interfaces, compose web pages, and communicate science to the public. Technical and professional writing is everywhere. It's a dynamic field and industry that is constantly changing to keep pace with new technologies, emerging problems, and audience needs. The Technical and Professional Writing Certificate prepares students to become innovative, collaborative, and technically proficient writers who can work across a range of fields, including business, health, nonprofits, technology, science, publishing, environment, and law.

Program Delivery

- The certificate can be completed through online, in-person, or hybrid courses.

Declaring This Certificate

- Please contact the certificate faculty advisor.

For questions about the Technical and Professional Writing certificate program contact Dr. Kari Campeau (kari.campeau@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Technical and Professional Writing advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Program Requirements

1. Students must complete a minimum of 12 ENGL credit hours.
2. Students must complete a minimum of nine upper-division (3000-level or higher) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All credits for the certificate must be completed with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must include an internship or a course (at least three credits) taken outside of the English department.
2. Students must attend at least three Career Center (http://www.ucdenver.edu/life/services/careercenter/Pages/default.aspx) activities, which can include events, workshops, or 1-on-1 appointments.

Code	Title	Hours
Complete one of the following technical and scientific writing courses:		*3*
These foundational courses introduce students to technical or scientific writing. Students can expect to gain an academic grounding as well as hands-on experience in technical or scientific writing.		
ENGL 3154	Technical Writing	
ENGL 4175	Writing in the Sciences	
Complete one of the following professional writing courses:		*3*
These courses offer students an opportunity to develop their TPW skills in a specific field or industry. Courses focus on the unique TPW skills and situations called for when writing for business, nonprofit, community, journalistic, or grant-writing contexts.		
ENGL 3170	Business Writing	
ENGL 4280	Proposal and Grant Writing	
ENGL 4701	Multimedia in the Community	
Complete one of the following rhetorical approaches courses:		*3*
These courses ground students' TPW skills in rhetorical approaches to writing. Rhetorical approaches are anchored to audience, context, purpose and are attuned to the social and cultural contexts of communication.		
ENGL 2060	Introduction to Writing & Digital Studies	
ENGL 2070	Grammar, Rhetoric and Style	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (in approved topics)	
Complete one of the following interdisciplinary learning courses:		*3*
Technical and professional communicators often collaborate with experts and contributors from a range of fields and backgrounds. This outside course requirement situates students to gain subject-matter expertise in a related field or internship.		
BIOL 3763	Biostatistics	
COMM 3660	Social Media for Social Change	
COMM 4282	Environmental Communication	
ENGL 3939	Internship	
IWKS 3200	Data Science for Innovators	
IWKS 3620	Mobile App Development	
PBHL 3030	Health Policy	
Any upper-division course or internship deemed to be central to the student's writing goals in consultation with the certificate Director		
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our website. (https://clas.ucdenver.edu/english/undergraduate-certificate-technical-and-professional-writing/)

Ethnic Studies

Chair: Rachel Harding
Business Operation Coordinator: Alexandria Joo
Office: Plaza Building, Ste. 102
Telephone: 303-315-7205
Fax: 303-315-7206

Overview

Ethnic Studies programs are designed to help students majoring in the liberal arts and sciences develop a sophisticated and broad understanding of ethnicity and its role in contemporary American society. They provide students with the theories and concepts needed to comprehend and interpret relations between and among ethnic groups in the United States. Students are better prepared to live and work in a diverse society when educational institutions foster a positive learning environment in which differences contained within various U.S. communities can be studied not as a social problem, as is often the case, but for their history of struggles and contributions.

The interdisciplinary nature of the ethnic studies program curriculum provides students the opportunity, through academic investigation, to develop a greater understanding of the cultural diversity of the present-day United States and to acquire skills needed in professional and social service fields. This multidisciplinary, comparative approach to contemporary and historical research methodologies provides the basis for students to analyze the diverse social, economic, political and cultural facets of ethnic groups in the United States. Special emphasis is given to new perspectives that recover the history, creative expression of underrepresented groups.

Programs and courses reflect prevailing thought in ethnic studies, draw parallels between various groups in the United States and link the studies of their ancestral origins with current and historical research on race and ethnic relations in the United States. They reflect critical analysis of the dominant perspectives through which ethnic groups have been described and perceived. Also investigated are the intersections of ethnicity with structures of political, educational, gender, business and economic, social and cultural power, all of which are emphasized through the study of materials and works by and about previously excluded groups. The cultural processes through which ethnic groups have sustained or altered their cultural identities are emphasized, as well as the pressures faced by members of various ethnic groups to maintain traditional values and conform to mainstream U.S. society.

Students may earn Latin Honors in the following way:

Cum Laude

Students must achieve a GPA of 3.3 in ALL CU Denver courses and a GPA of 3.5 in all ETST course

Magna Cum Laude

Students must achieve a GPA of 3.5 in ALL CU Denver courses and a GPA of 3.7 in all ETST courses

Summa Cum Laude

Students must achieve a GPA of 3.7 in ALL CU Denver courses and a GPA of 3.85 in all ETST courses.

Undergraduate Information

Ethnic Studies Major

Click here (p. 498) for information about the requirements for the Major in Ethnic Studies.

Ethnic Studies Minor

Click here (p. 499) for the requirements for the Minor in Ethnic Studies.

Undergraduate Certificates

Click here (p. 501) for information about the Undergraduate Certificate in American Indian Studies.
Click here (p. 500) for information about the Undergraduate Certificate in African American Studies.
Click here (p. 503) for information about the Undergraduate Certificate in Cultural Diversity Studies.
Click here (p. 504) for information about the Undergraduate Certificate in Latinx Studies.

Programs

- Ethnic Studies, BA (p. 498)
- Ethnic Studies Minor (p. 499)
- African American Studies Undergraduate Certificate (p. 500)
- American Indian Studies Undergraduate Certificate (p. 501)
- Asian American Pacific Islanders Studies Undergraduate Certificate (p. 502)
- Cultural Diversity Studies Undergraduate Certificate (p. 503)
- Latinx Studies Undergraduate Certificate (p. 504)

Faculty

Associate Professors

Faye Caronan, PhD, University of California, San Diego
Rachel E. Harding, PhD, University of Colorado, Boulder

Associate Professors Clinical Teaching Track

Katherine Mohrman, PhD, University of Minnesota Twin Cities
Elizabeth Garcia, PhD, University of California Berkeley

Assistant Professor

Chad Shomura, PhD, Johns Hopkins University

Senior Instructor

Dennis Green, ABD, University of New Mexico

Emeritus Professors

Paula Espinoza, PhD, University of Colorado Boulder
Donna Martinez, PhD, University of Washington

Ethnic Studies (ETST)

ETST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

ETST 2000 - Introduction to Ethnic Studies (3 Credits)
Multi-disciplinary survey of contemporary and historical research analyses of the diverse social, economic, political, and cultural facets of African American, American Indian, Asian American, and Latino communities and cultures. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring.

ETST 2024 - Race and Ethnic Relations (3 Credits)
Surveys race and ethnicity, facts and myths about great populations, and the social and cultural sources of bias and discrimination. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 2108 - Introduction to Chicanx and Latinx Studies (3 Credits)
This course introduces students to the broad range of the interdisciplinary fields of Chicanx and Latinx Studies by examining the Chicanx and Latinx experience including history, identity, politics, immigration, labor, literature, and popular culture. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Spring.

ETST 2155 - African American History (3 Credits)
Surveys the history of African Americans. Study interpretations, and analysis of major problems, issues, and trends affecting the African American population from pre-slavery to the present. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

ETST 2357 - Asian American & Pacific Islander Cultures (3 Credits)
This is an introductory course that will examine how Asian Americans and Pacific Islanders have been represented in American popular culture and how Asian Americans and Pacific Islanders have sought to challenge and complicate those dominant cultural images to define themselves and their diverse experiences. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

ETST 2400 - Issues in Chicano/a Education (3 Credits)
Historical overview of segregation, landmark court cases and immigration policy in the education of Chicano/as in Colorado and nationally from 1920 to the present. The intersection of these issues in the education of undocumented students is also examined. Cross-listed with TCED 2400. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3002 - Ethnicity, Health and Social Justice (3 Credits)
Surveys core issues contributing to racial or ethnic minority differences in health status. Historical and contemporary U.S. health and social policy, including the areas of environmental health, sexual and reproductive health, children and immigrants, are examined. Cross-listed with PBHL 3002. Term offered: fall. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ETST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with HIST 3003, INTS 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ETST 3036 - American Indian Cultural Images (3 Credits)
Analysis of images and perceptions of American Indians in American culture, as seen in politics, education, film, photography, advertising, art, literature and the media. Note: Students may not earn credit for this course if they have earned credit for ETST 2036. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Summer.

ETST 3060 - AAPI Communities and Health (3 Credits)
Surveys core issues shaping health experiences and health status of Asian American and Pacific Islander communities in the United States. Historical and contemporary U.S. health and social policies that have directly impacted AAPI health and well-being in the United States are examined. Students will also engage with community leaders and partners committed to AAPI communities. Cross-listed with PBHL 3060. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3108 - Chicano/a and Latino/a History (3 Credits)
An historical analysis of person's descendant from Mexico and Latin America. Areas of focus include ethnohistorical backgrounds, current interrelations, and social movements in both rural and urban groups. Other topics include: cultural patterns, identity maintenance, social reforms and problems of national incorporation. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3110 - Indigenous Studies (3 Credits)
Examines how communities in diverse world regions preserve tradition, share knowledge, and respond to influences both within and outside of their immediate environments. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

ETST 3125 - Multiracial Families and Communities (3 Credits)
Examines specific issues related to multiracial, multicultural and mixed heritage families in the U.S., including historical, sociocultural, economic and political factors involved. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3129 - Contemporary Latin American Literature (3 Credits)
The best of contemporary Latin American novels. Examines how U.S. policies in Latin America affect literary creation. Note: Taught in English. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3155 - The African Diaspora (3 Credits)
This course examines historical and contemporary experiences of Africans and people of African descent in various parts of the world – with a special focus on African immigrants in the US, Black Americans with generational roots in the USA, Blacks in Europe and Afro-Latin Americans. The course incorporates perspectives from history, literature, religious studies, visual art, political science, sociology and anthropology in an effort to provide a range of materials that address the diversity and complexity of the experiences of Africans and people of African descent. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3211 - Hip Hop Music & Culture (3 Credits)
Covers the historical trajectory of hip hop music and culture from inception, aims to restructure stereotypes and offer a deeper perspective into how hip hop defines the identities of individuals as well as the consciousness of the masses within society. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3230 - African American Family (3 Credits)
Exploration of the African American family social institution. Emphasis on historical roots and African influence is still enmeshed in the functioning of the family in modern society. Factors responsible for the ability of the family to meet the challenging society. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3272 - Global Media (3 Credits)
Introduction to leading issues in the study of transnational media. The course will focus on the global media environment in the early 21st century, diverse countries, a variety of media, and social issues. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

ETST 3274 - Power, Poverty, Culture (3 Credits)
Studies the process that has rendered certain groups poor for generations. Studies African Americans, Whites, Chicanos/as and Latinos/as, and other ethnic groups that have lived in this society in a state of poverty. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3297 - Social History of Asian Americans (3 Credits)
Introductory-level course surveys the social history of Asian American groups from the mid-19th century to the present. Examines immigration patterns, the development of communities, social and economic problems, and anti-Asian movements and activities. Cross-listed with HIST 3297. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3350 - Colonial Latin America (3 Credits)
Surveys the creation of colonial empires by Spain and Portugal, 1492-1808. Topics include Native American responses to European incursions, women in colonial society, and slavery in Latin America. Cross-listed with HIST 5350 and HIST 3350. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3396 - History of the American Indian (3 Credits)
Indigenous nations in North America comprise hundreds of diverse cultures. This course examines U.S. Indian policy and how indigenous nations responded; how they creatively adapted, and resisted cultural change; and how they continue to persist culturally, socially, and politically. Cross-listed with HIST 3396. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3574 - Topics in Ethnic Studies (3 Credits)
Topics vary from term to term, based upon interest and availability of instructors in specialized areas. Term offered: spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Spring.

ETST 3697 - Contemporary Asian American Experience (3 Credits)
Examines the contemporary Asian American experience, including the adaptation of new immigrants or refugees, economic and educational problems, ethnic identity, intermarriage, anti-Asian discrimination and other civil rights issues, and recent political activism. Cross-listed with SOCY 3697. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3704 - Culture, Racism and Alienation (3 Credits)
The effects of racism on the personality of participants in racist cultures. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ETST 3840 - Independent Study: ETST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

ETST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Department consent required. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

ETST 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

ETST 4000 - Research Methods in Ethnic Studies (3 Credits)
Emphasizes the acquisition of a variety of data or information collection and analytic skills, especially those applicable to historical and social inquiry in ethnic studies. Cross-listed with ETST 5000. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ETST 4020 - Race, Culture and Immigration (3 Credits)
In this course, we will consider the social and legal construction of race and immigration. We will also explore how immigrants have been racialized both historically and in the current moment. In addition, we will consider the role of culture in shaping the immigrant experience and immigrant outcomes. Restriction: Junior standing or higher or instructor permission. Cross-listed with SOCY 4020, SOCY 5020 and ETST 5020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ETST 4030 - Race, Religion and Belonging in the United States (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images#as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 5030, RLST 4030, RLST 5030, HIST 4209 and HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4144 - Indigenous Political Systems (3 Credits)
Surveys political theory and practice in indigenous societies in the Americas. Examines the impact of indigenous political thought on Euro-American politics, especially the U.S. Constitution, and explores the contemporary impact of indigenous people on current politics. Cross-listed with PSCI 4144. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4146 - Indigenous Politics (3 Credits)
Surveys the status of the world's native peoples and nations, and the role of law and politics in the future of indigenous peoples in the global arena. Examines questions of human rights, economic development, and international law and politics. Cross-listed with PSCI 4146, 5145. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4156 - The Arab-Israeli Peace Process (3 Credits)
Critical analysis of Arab and Israeli perspectives on the on-going peace negotiations in the Middle East. Historical background and religious-cultural aspects of current problems. Prereq: Upper division standing. Cross-listed with PSCI 4156. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ETST 4165 - Cultural Diversity Awareness in the Workplace (3 Credits)
This course will analyze the impact and effectiveness of cultural diversity awareness in a variety of workplace settings including educational institutions, businesses, health care organizations, and non-profit organizations. Students will learn how implicit biases and structural inequality impact workplace culture, a work place's productivity, and a work place's ability to fulfill their mission. By the end of the course, students will acquire the skills to advocate for and implement inclusive work place policies. Cross-listed with ETST 5165. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4220 - African-American Literature (3 Credits)
Surveys African-American literature with special emphasis on post-Civil War writing. Cross-listed with ETST 5220, ENGL 4220 and 5220. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 4297 - Theorizing the Transpacific (3 Credits)
What is the transpacific? Though this term is most associated with global trade and economic interests, this course will examine the migratory and cultural precedents for this term. What do other perspectives from Oceania and from pacific rim countries offer us to theorize the meaning of the transpacific(s). How might a social and cultural understanding of the transpacific engage with the political and economic understandings of the transpacific undergirded by trade relations? Note: Recommended that ETST 3297- Social History of Asian Americans be completed first. Term offered: spring. Cross-listed with ETST 5297. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4305 - Women of Color Feminisms (3 Credits)
This course is an overview of women of color feminist theorizing (thinking) and praxis (practice) in the U.S. We will explore these feminisms through the writing, art, and organizing efforts of women and trans, femme, and non-binary people of color with a focus on key themes and concepts including identity, difference, oppression, intersectionality, representation, violence, resistance, empowerment, solidarity, and coalition. Texts for the course highlight key issues in the feminist theorizing and praxis of Black, Latina/x, Chicana/x, Asian (American), Pacific Islander, Indigenous, and Arab (American) women and trans, femme, and non-binary people of color, especially the politics of identity and representation; structural oppressions and violences; and practices of survival, resistance, and activism. Not only will we examine how these feminists have critiqued oppression(s) based on race, class, gender, sexuality, nationality, and religion, (as well as how these systems of domination intersect), but what kinds of approaches, strategies, and changes these thinkers and activists have organized for and promoted. Cross-listed with ETST 5305, WGST 4305 and WGST 5305. Max hours: 3 Credits
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4411 - Modern Mexico (3 Credits)
Designed to familiarize students with the critical issues of Mexican political, economic and social history. Traces the emergence of independence and the difficult consolidation of an independent nation state. Cross-listed with HIST 4411, 5411. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4457 - American Political Thought (3 Credits)
Critical examination of American political life at the intersections of social categories such as race, class, gender, sexuality, disability, and Indigeneity. Exploration of key and marginal thinkers through a variety of texts and genres. Cross-listed with PSCI 4457, PSCI 5457, and ETST 5457. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4574 - Special Topics (3 Credits)
Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4722 - Communicating Latinx Cultures (3 Credits)
Communicating Latina/o/x Cultures centers historical and contemporary vernacular and institutional discourse sand narratives about, by, and for Latina/o/x people and communities. Drawing on theories, methods, and practices to understand the complexities of Latina/o/x cultures and lives, we will investigate how different actors and activists express and experience borders, migration, dispossession, citizenship, colonialism/coloniality, colorism, white supremacy, environmental racism(including anti-Blackness), mono- and multilingualism, self-determination struggles, power, representation, resistance, and mutual support networks for alternative worldmaking. To situate these concepts and concerns, we will explore contexts and places ranging from Colorado to the Caribbean. Term Typically Offered: Spring. Cross-listed with COMM 4722, COMM 5722, and ETST 5722. Max hours: 3 credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4768 - Chicano/Chicana Narrative and Social History (3 Credits)
Provides a general, chronological, and thematic introduction to short stories and novels written by U.S. citizens of Mexican descent. Begins with early 20th century narratives by women, continues with the corrido and Post-World War II male writers, and ends with more recent publications by contemporary women writers. Social, historical, and political backgrounds are also emphasized, along with an analysis of the literary techniques and motifs. Cross-listed with ENGL 4768. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4840 - Independent Study: ETST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ETST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

ETST 4960 - Capstone in Ethnic Studies (3 Credits)
Provides a broad overview of social research methods pertinent to the study of race, ethnicity, gender, and culture. Explores theories concerning "ethnicity and race" as both social construct and constituent feature of people's identities and lived experiences. Ethnic Studies is an interdisciplinary major where students make connections across diverse fields of inquiry; this course provides a structure for integrating an interdisciplinary examination of the intellectual, cultural, and social dimensions of racial and ethnic groups. Cross-listed with ETST 5960. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

Ethnic Studies, BA

Introduction

Please click here (p. 492) to see Ethnic Studies department information.

The Ethnic Studies BA curriculum trains students to transform society and engage in real-world problem solving through a vibrant interaction with the intersectional histories and contributions of Black, Indigenous, and other People of Color (BIPOC). Ethnic Studies graduates cultivate cultural competency skills that are highly valued by employers, who serve increasingly diverse clientele. Our students find employment in a variety of fields including: law, teaching, journalism, marketing, community organizing and social work.

Program Delivery

- This is an on-campus and online program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 33 credits in ETST coursework.
2. Students must complete a minimum of 16 upper division (3000-level and above) ETST credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete 15 ETST credit hours with CU Denver faculty.

Code	Title	Hours
Complete all of the following required Ethnic Studies courses:		*21*
ETST 2000	Introduction to Ethnic Studies	
ETST 2155	African American History	
ETST 3108	Chicano/a and Latino/a History	
ETST/HIST 3297	Social History of Asian Americans	
ETST/HIST 3396	History of the American Indian	
ETST 4000	Research Methods in Ethnic Studies	
ETST 4960	Capstone in Ethnic Studies	
Complete four additional upper-division (3000 or above) Ethnic Studies elective courses.		*12*
Total Hours		**33**

Upon completion of the Ethnic Studies BA, students will be able to

- Explain theories and histories of marginalization and discrimination. Discuss the implications of biased treatment on contemporary events
- Identify diverse social positions. Analyze how social position affects access
- Describe the evolution and social construction of collective identities
- Be aware of one's own attitudes and identities in the context of cultural diversity. Recognize the connection between one's own attitudes and identities and personal and professional interactions
- Summarize the contributions and impact by diverse groups to institutions and society

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcomes page (https://clas.ucdenver.edu/ethnic-studies/sites/default/files/attached-files/etstlearning_outcomes.pdf).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Ethnic Studies Minor

Introduction

Please click here (p. 492) to see Ethnic Studies department information.

Ethnic Studies minors develop cultural competency skills that prepare them to live and work in a diverse, multicultural society. These skills are highly valued by employers, who serve increasingly diverse clientele. Ethnic studies minors find employment in a variety of fields including: law, teaching, journalism, marketing, community organizing and social work.

Program Delivery

- This is an on-campus and online program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a major/minor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor, in addition to their individual minor requirements.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 ETST credit hours (6 courses).
2. Students must complete a minimum of nine upper-division (3000-level and above) ETST credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete all ETST course requirements for the Ethnic Studies minor with CU Denver faculty. Transfer courses do not apply.

Code	Title	Hours
Complete the following required course:		*3*
ETST 2000	Introduction to Ethnic Studies	
Complete one ETST course from each of the following focal U.S. racial/ethnic groups:		*12*
Asian-Americans		
ETST/HIST 3297	Social History of Asian Americans	
ETST/SOCY 3697	Contemporary Asian American Experience	
African-Americans		
ETST 2155	African American History	
ETST 3230	African American Family	
ETST/ENGL 4220	African-American Literature	
American Indians		
ETST 3110	Indigenous Studies	
ETST 3036	American Indian Cultural Images	
ETST/HIST 3396	History of the American Indian	
ETST/PSCI 4144	Indigenous Political Systems	
ETST/PSCI 4146	Indigenous Politics	
Chicanos/as and Latinos/as		
ETST 3108	Chicano/a and Latino/a History	
ETST/HIST 3350	Colonial Latin America	
Complete one additional ETST elective course of your choice.		*3*
Total Hours		**18**

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcomes page (https://clas.ucdenver.edu/ethnic-studies/sites/default/files/attached-files/etstlearning_outcomes.pdf).

African American Studies Undergraduate Certificate

Introduction

Please click here (p. 492) to see the Ethnic Studies department information.

African American Studies is a multidisciplinary and interdisciplinary field examining the histories, cultures, and political and social engagements of people of African descent in the United States. Courses offered through the African American Studies certificate program encourage students to explore a broad range of historical and contemporary issues impacting native-born African Americans as well as African, Caribbean, and Afro-Latin American immigrants to the USA. Our courses address transformations in the social, political, gender, sexual, religious, and ethnic identities of people of African descent; meanings of race and family; social justice movements and activism; literature and cultural expression; and the nature of diaspora in the Black experience.

African American studies is the cornerstone discipline of Ethnic Studies, both in the history of our university and in the larger movement for inclusive educational frameworks in the United States. As a field, it has developed a tradition that weds incisive critical thinking, creative problem solving and a commitment to applied approaches that benefit the larger society beyond the walls of the university.

An African American Studies certificate prepares students to work with racially and ethnically diverse communities in the United States or abroad in a wide variety of careers, including teaching, higher education administration, community organizing, community and government service, journalism and the media, environmental science, non-profit administration, global economics, health care, legal services, library science, music, publishing, and research.

Additional information about the undergraduate certificate in African American studies may be obtained from the Ethnic Studies department at 303-315-7205 or email: ethnic_studies@ucdenver.edu

Additional information about the African American Studies certificate may be obtained from Ethnic Studies, Plaza Building, Suite 102

Website: https://clas.ucdenver.edu/ethnicstudies (https://clas.ucdenver.edu/ethnicstudies/certificates/)

Faculty Advisor: Professor Rachel Harding (https://clas.ucdenver.edu/ethnic-studies/rachel-e-harding/) email: Rachel.Harding@ucdenver.edu

Program Delivery

- This is an on-campus program and some courses are available online.

Declaring This Certificate

- Please contact the certificate faculty advisor Rachel Harding (https://clas.ucdenver.edu/ethnic-studies/rachel-e-harding/) email: Rachel.Harding@ucdenver.edu

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their African American Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses below.

2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours taken from among the approved courses.

3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.

4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Certificate Requirements

Code	Title	Hours
Complete the following required African American Studies course:		**3**
ETST 2155	African American History	
Complete three African American Studies elective courses from among the following:		**9**
ETST 3155	The African Diaspora	
ETST 3211	Hip Hop Music & Culture	
ETST 3230	African American Family	
HIST 3347	African-American History, 1619-Present	
ENGL 3750	American Literature after the Civil War	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
ETST/ENGL 4220	African-American Literature	
HIST 4212	Civil War and Reconstruction	
HIST/WGST 4225/ GEOG 4625	Urban America	
HIST 4308	Crime, Policing, and Justice in American History	
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcome page (https://clas.ucdenver.edu/ethnic-studies/sites/default/files/attached-files/etstlearning_outcomes.pdf).

American Indian Studies Undergraduate Certificate

Introduction

Please click here (p. 492) to see Ethnic Studies department information.

A 12-credit online program with opportunities in American Indian related internships.

This certificate is designed to appeal to undergraduate students with a background in any major. The certificate is also targeted to nondegree-seeking professionals. Courses will examine historical and contemporary tribal experiences. Students will be encouraged to think critically about the stereotypes of American Indians and tribal governments. A certificate in American Indian Studies offers students an enduring intellectual base to understand both the foundations of America and diversity among tribes with different languages, histories, and cultures. The courses provide students the opportunity to encounter theories posited by a rich history of American Indian intellectuals.

Additional information about the undergraduate certificate in American Indian Studies may be obtained from ethnic studies Plaza Building, Suite 102
Phone: 303.315.7205
Website: https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates#american_indian_studies_certificate-172 (https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates/#american_indian_studies_certificate-172)
Faculty Advisor: Professor Faye Caronan (https://clas.ucdenver.edu/ethnic-studies/faye-caronan/) email: faye.caronan@ucdenver.edu (Faye.Caronan@ucdenver.edu)

Program Delivery

- This is an on-online program.

Declaring This Certificate

- Please contact the certificate faculty advisor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their American Indian Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses below.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours taken from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Code	Title	Hours
Complete all of the following courses:		*12*
ETST 3036	American Indian Cultural Images	
ETST 3110	Indigenous Studies	
ETST/HIST 3396	History of the American Indian	
ETST 3939	Internship [1]	
or ETST 3840	Independent Study: ETST	
Total Hours		**12**

[1] Contact faculty advisor for placement in the community.

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcomes page (https://clas.ucdenver.edu/ethnic-studies/american-indian-studies-certificate-learning-outcomes/).

Asian American Pacific Islanders Studies Undergraduate Certificate

Introduction

AAPI studies integrates the study of Asian American and Pacific Islander communities in the United States with analysis of the histories, politics, cultures, and societies of countries in Asia and the Pacific and Asian and Pacific Islander diasporic communities. AAPI Studies certificate courses deal with changing political, social, economic and cultural realities, including US imperialism, US military interventions, settler colonialism, migration, and transnational communities; gender, racial, sexual, and ethnic identities; social movements; diverse forms of cultural expression; ongoing political and economic restructuring in Asia and the Pacific Islands; and the challenges of cultural, political, and economic empowerment for AAPI communities in the United States.

Training and Application

An AAPI studies certificate prepares students to work with Asian American and Pacific Islander communities in Denver, elsewhere in the United States or abroad in a wide variety of careers, including teaching, higher education administration, community organizing, community and government service, journalism and the media, environmental science, global business, health care, legal services, library science, music, publishing, and research. Students will be encouraged to intern in local organizations working with the AAPI population.

Please click here (p. 492) to see Ethnic Studies department information

Additional information about the AAPI certificate may be obtained from Ethnic Studies

Plaza Building, Suite 102
Phone: 303.315.7205
https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates#asian_american_studies_certificate-172 (https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates/#asian_american_studies_certificate-172)
Faculty Advisor: Professor Faye Caronan (https://clas.ucdenver.edu/ethnic-studies/faye-caronan/) email: Faye.Caronan@ucdenver.edu

Program Delivery

- This is an on campus program with some courses available online.

Declaring This Certificate

- Please contact the certificate faculty advisor, Faye Caronan.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Asian American Pacific Islander Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses below.

2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours taken from among the approved courses.

3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.

4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Code	Title	Hours
Complete the following required Asian American Pacific Islanders Studies courses:		*6*
ETST 2357	Asian American & Pacific Islander Cultures	
ETST 3297	Social History of Asian Americans	
Complete two of the following Asian American Pacific Islanders Studies elective courses:		*6*
ETST 3697	Contemporary Asian American Experience	
ETST 4297	Theorizing the Transpacific	
ETST 3939	Internship	
HIST 3470	Intro to East Asia: Since 1800	
HIST/CHIN 4421	Modern China	
Total Hours		**12**

By the end of a certificate in AAPI Studies students should be able to:

1. Summarize the contributions that Asian and Pacific Islander individuals and populations have made in US history, culture, and society.

2. Recognize differences in national origin, mode of immigration, citizenship, skin color, gender and sexuality among Asian American and Pacific Islander individuals and populations and how these shape their experiences.

3. Articulate how US economic, political, and military occupation and interventions in Asia and the Pacific and the changing roles of U.S. - Asia relations impact Asian American and Pacific Islander experiences.

4. Analyze Asian American and Pacific Islander communities within cultural, social, political, and historical contexts.

Cultural Diversity Studies Undergraduate Certificate

Introduction

Please click here (p. 492) to see Ethnic Studies department information.

The undergraduate certificate in cultural diversity studies is designed to appeal to undergraduate students with a background in any major. It will allow students to demonstrate to potential employers that they possess the multicultural skills and knowledge necessary to succeed in the workplace. Students will enroll in department courses that focus on the historical context in which race and culture have emerged in the United States.

This certificate is also targeted to non-degree-seeking professionals who seek to acquire multicultural knowledge and the skills necessary to ensure their success in professional environments. Students will be encouraged to think critically about race and race relations. Their expanded understandings of the implications of race and culture in work environments will ensure employers that they offer the highest quality employees opportunities in employment or advancement.

Additional information about the undergraduate certificate in cultural diversity studies may be obtained from the Ethnic Studies

Plaza Building, Suite 102
Phone: 303.315.7205
https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates#cultural_diversity_certificate-172 (https://clas.ucdenver.edu/ethnic-studies/academic-tracks/certificates/#cultural_diversity_certificate-172)
Faculty Advisor: Professor Faye Caronan (https://clas.ucdenver.edu/ethnic-studies/faye-caronan/) email: Faye.Caronan@ucdenver.edu

Program Delivery

- This is an on-campus program and all courses are available online.

Declaring This Certificate

- Please contact the certificate faculty advisor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Cultural Diversity Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 ETST credit hours.
2. Students must complete a minimum of six ETST upper division (3000- level and above) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all ETST credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. There are cross-listed courses in a variety of departments, including history, political science and sociology. Any cross-listed course is acceptable, but the student should register for it under the ETST subject code. A complete listing of department offerings and cross--listed courses can be obtained every semester from the Ethnic Studies Department web page or by calling our office for a copy.

Code	Title	Hours
Complete the following required Cultural Diversity Studies courses:		*6*
ETST 2000	Introduction to Ethnic Studies	
ETST 4165	Cultural Diversity Awareness in the Workplace	
Complete two additional ETST courses with at least one being at the 3000 or 4000 level.		*6*
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcomes page (https://clas.ucdenver.edu/ethnic-studies/sites/default/files/attached-files/etstlearning_outcomes.pdf).

Latinx Studies Undergraduate Certificate

Introduction

Please click here (p. 492) to see Ethnic Studies department information

Latinx studies integrates the study of Latinx communities in the United States with analysis of the histories, politics, cultures, and societies of Latin America and the Caribbean. Latinx Studies certificate courses deal with changing political, social, economic and cultural realities, including immigration and transnational communities; gender, racial, sexual, and ethnic identities; social movements; diverse forms of cultural expression; ongoing political and economic restructuring in Latin America; and the challenges of political and economic empowerment for Latinx communities in the United States.

A Latinx certificate prepares students to work with Latinx communities in the United States or abroad in a wide variety of careers, including teaching, higher education administration, community organizing, community and government service, journalism and the media, environmental science, global economics, health care, legal services, library science, music, publishing, and research.

Additional information about the Latinx Studies certificate may be obtained from Ethnic Studies

Plaza Building, Suite 102
Office: 303.315.7205
https://clas.ucdenver.edu/ethnicstudies/ (https://clas.ucdenver.edu/ethnicstudies/certificates/)
Faculty Advisor: Professor Elizabeth Garcia (https://clas.ucdenver.edu/ethnic-studies/elizabeth-garcia/) email: elizabeth.8.garcia@ucdenver.edu

Program Delivery

- This is an on campus program with some courses available online.

Declaring This Certificate

- Please contact the certificate faculty advisor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Latinx Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Certificate Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses below.

2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours taken from the approved courses.

3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.

4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Code	Title	Hours
Complete the following required course:		*3*
ETST 2108	Introduction to Chicanx and Latinx Studies	
Complete three Latinx Studies elective courses:		*9*
ETST 3108	Chicano/a and Latino/a History	
ETST 4574	Special Topics	
ETST 4768	Chicano/Chicana Narrative and Social History	
ANTH 4300	Migrant Health	
GEOG 3130	Central America and the Caribbean	
GEOG 3140	Geography of South America	
HIST 3460	Modern Latin American History	
HIST 4412	Mexico and the United States: People and Politics on the Border	
SPAN 3025	Writing for Latinos	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact [1]	
SPAN 4030	The Learning and Teaching of Heritage Speakers [1]	
SPAN 4076	Spanish in Colorado [1]	
SPAN 4080	Spanish in the United States [1]	
Total Hours		**12**

[1] Indicates courses that have prerequisites and require fluency in Spanish.

To learn more about the Student Learning Outcomes for this program, please visit our Ethnic Studies Learning Outcomes page (https://clas.ucdenver.edu/ethnic-studies/sites/default/files/attached-files/etstlearning_outcomes.pdf).

Geography and Environmental Sciences

Chair: Peter Anthamatten, PhD
Program Assistant: Sue Eddleman
Office: North Classroom, 3016
Telephone: 303-315-7525
Fax: 303-315-7526

Overview

Undergraduate Information

Geography is a discipline focuses on the spatial analysis of human/physical patterns and processes. Geographers explore factors affecting the distribution of people and their activities on the surface of the earth to seek meaningful solutions to contemporary problems faced by societies. This discipline is an ideal major for liberal arts students seeking a broad, holistic approach to the study of modern questions centered around human interactions with the environment, providing exposure to the concepts and techniques utilized in investigating the physical sciences, environmental and sustainability, socioeconomic problems and planning policies.

The major offers 4 degree options:

1. General Geography
2. Environmental Science
3. Environment, Society & Sustainability
4. Urban Studies & Planning

The program offers a distinctive curriculum that combines a broad and integrative scientific education with state-of-the-art training in geo-spatial analysis (e.g., computer mapping, GIS, remote sensing). The program is designed to provide the student interested in physical, social or environmental geography with the background necessary for obtaining a rewarding career in government (federal, state, local) or private industry, as well as preparing students for graduate study.

Departmental Honors

Departmental honors is a privilege for students who demonstrate exceptional academic performance and promise at CU Denver. The minimum criteria for honors in GES are an overall GPA of 3.3 in all courses at CU Denver (minimum of 30 semester hours for transfer students) and a GPA of 3.75 for all courses taken in the Department of Geography and Environmental Sciences (regardless of the BA option that students are pursuing). A student who meets these criteria shall work with a GES faculty sponsor who agrees to guide an honors thesis. Students must successfully complete and defend an honors thesis that demonstrates independent research, written and presentation skills. Additionally, students are required to sign up for and successfully complete 3 honors thesis credits the semester that they are graduating with honors. Departmental honors will be awarded based on successful completion and defense of the honors thesis, subject to faculty sponsor and committee approval. For more information, please contact the GES undergraduate advisor and/or chair.

Graduate Information

Please go to the **Graduate** catalog to read about our graduate programs.

Programs

- Geography, BA (p. 517)
- Geography - Environment, Society and Sustainability Option, BA (p. 520)
- Geography - Environmental Science Option, BA (p. 522)
- Geography - Urban Studies and Planning, BA (p. 526)
- Environmental Sciences Minor (p. 528)
- Geography Minor (p. 531)
- Urban Studies and Planning Minor (p. 532)
- Geographic Information Science Undergraduate Certificate (p. 533)
- Free and Open Source Software for Geospatial Applications Undergraduate Certificate (p. 535)
- Sustainable Urban Agriculture Undergraduate Certificate (p. 537)

Faculty

Professors:

Anne Chin, PhD, Arizona State University
Pamela Jansma, PhD, Northwestern University (CLAS Dean)
Rafael Moreno-Sanchez, PhD, Colorado State University
Gregory Simon, PhD, University of Washington

Professors Emeriti:

Rudi Hartmann, PhD, Technical University of Munich
Wesley E. LeMasurier, PhD, Stanford University
Martin Lockley, PhD, University of Birmingham, England
John W. Wyckoff, PhD, University of Utah

Associate Professors:

Peter Anthamatten, PhD, University of Minnesota
Christy Briles, PhD, University of Oregon
Frederick B. Chambers, PhD, Arizona State University
Brian Page, PhD, University of California, Berkeley
Bryan S. Wee, PhD, Purdue University

Assistant Professors:

Benjamin Crawford, PhD, University of British Columbia, Vancouver
Katharine Kelsey, PhD, University of Colorado Boulder
Lisa Kelley, PhD, University of California Berkley

Assistant Professors Clinical Teaching Track:

Thomas Duster, PhD, University of Notre Dame

Senior Instructors:

Amanda Weaver, PhD, University of Denver

Instructors:

Kirsten Christensen, MSS, MURP, University of Colorado Denver
Yi-Chia Chen, PhD, Louisiana State University

Lecturers:

Richard Ashmore
Jonathan Burton
Tim Connors
Alicia Cowart
Hope Dalton
Richard DeGrandchamp
Amy DePierre
David Murray

Ricardo Oliveira
Mandy Rees

Geography (GEOG)

GEOG 1102 - World Regions Global Context (3 Credits)
Analyzes world regions and their global interconnectedness, including the dynamic and complex relationships between people and the world they inhabit. Demographic and cultural (political, economic, and historic) issues are examined as well as interactions between human societies and natural environments. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring, Summer.

GEOG 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

GEOG 1202 - Introduction to Physical Geography (3 Credits)
The science that studies the processes, forms, and spatial or geographic structures of natural systems operating at or near the earth's surface, including weather, climate, and landform processes. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

GEOG 1302 - Introduction to Human Geography (3 Credits)
Systematic introduction to basic concepts and approaches in human geographic analysis. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

GEOG 1602 - Urban Studies and Planning (3 Credits)
Surveys the process of urbanization, emphasizing the development of American cities, using Denver as an example. Topics covered include: evolution of metropolitan form/land use patterns, cultural landscape formation, city planning and architectural design, and urban social and policy issues. Note: This course is a prerequisite for GEOG 4680 Urban Sustainability: Perspectives and Practice AND GEOG 4640 Urban Geography Denver and the US. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

GEOG 2080 - Introduction to Mapping and Map Analysis (3 Credits)
Studies major elements in the preparation of thematic maps, including sources of data collection and manipulation of data, and cartographic techniques for display of data. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

GEOG 2202 - Hazards to Disasters: Perception and Management (3 Credits)
Surveys those physical phenomena that often cause substantial damage when they occur in areas of human settlement. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography.
Typically Offered: Fall, Spring, Summer.

GEOG 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

GEOG 3100 - Geography of Colorado (3 Credits)
An analysis of the physical environment, history of settlement, and resource base of Colorado in relation to present economic patterns of the state. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3110 - Geography of North America (3 Credits)
Systematic study of the physical, cultural, economic, and political relationships that shape the landscape of the United States, Canada, Greenland, and the U.S.-Mexico Borderlands. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3120 - Geography of Europe (3 Credits)
An analysis of the physical environment, resource utilization, economic development and cooperation in Europe. A cultural and political geography which focuses on continuity and change in Eastern and Western Europe. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3130 - Central America and the Caribbean (3 Credits)
Surveys the physical environment and cultural development of Central America and the Caribbean Islands. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3140 - Geography of South America (3 Credits)
The physical environment, cultural development, and political instability within the area are analyzed. Influence of the landscape and climate, as well as Iberian cultural and land tenure patterns on historic settlement and modern growth are discussed. Problems associated with population, economics, politics, education, and geography are emphasized. Term offered: spring. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 3150 - Middle East (3 Credits)
Physical, cultural, and economic approach to the arid lands of the Middle East, including Arab land of the Sahara. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3160 - Geography of China (3 Credits)
Geographic survey of the physical, cultural, and economic features characterizing the geography of China. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3232 - Weather and Climate (3 Credits)
Introduces the processes and systems that govern both day-to-day weather and longer-term climate variations. Covers instrumentation and weather forecasting techniques. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with ENVS 3232. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

GEOG 3240 - Colorado Climates (3 Credits)
Provides a broad overview of the various weather and climate patterns that are found within the state of Colorado. To accomplish this, the state of Colorado will be divided into regions which (hopefully) have a large degree of homogeneity in terms of weather and climate controls. Note: Taught in a seminar style with students giving presentations and reports on their findings about a given region. Prereq: GEOG 3232 with a C- or higher, or instructor permission. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.
Typically Offered: Spring.

GEOG 3401 - Geography of Food and Agriculture (3 Credits)
An overview of food systems and agriculture as they impact an increasingly urbanized planet. We will survey historical food production and preservation, food justice and insecurity, land-use and preservation, as well as local and global systems of distribution and consumption. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 3412 - Globalization and Regional Development (3 Credits)
Addresses global political-restructuring and its implications for regional development in the U.S. Both historical and contemporary processes of globalization are examined. Topics include: the environmental basis of American industrial growth, the relationship between technological change and geographical shifts, the rise and decline of Fordism, the transfer of Japanese manufacturing methods to the U.S., the role of regional and national industrial policy, and the social consequences of globalization for labor and communities. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Students will not earn credit for GEOG 3412 if they have already earned credit for GEOG 3411. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

GEOG 3430 - Geography of Tourism (3 Credits)
Geographic analysis of trends in recreation, travel, and tourism, and their economic, social, and environmental impacts. Examines growth and change in resorts and tourist destination areas. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: this course assumes that students have completed GEOG 1302 or GEOG 3411. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3501 - Geography of Health (3 Credits)
Offers a critical geographic perspective to human health issues, examining disease distributions, how changing relationships between people and their environments (natural, built, and social environments) influence health, and different approaches to the study of health in geography. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3840 - Independent Study: GEOG (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOG 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

GEOG 3990 - Special Topics (3 Credits)
Investigation of current topics in geography such as analysis of issues (crime, public transportation), techniques (socioeconomic impact analysis), or areas of specialization (climatology). Note: specific necessary prior coursework varies with each topic; students are expected to have completed at least six hours in relevant social or physical science coursework. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOG 4010 - Landscape Biogeochemistry (3 Credits)
A holistic approach to studying the role chemical elements play in synthesis/decomposition cycles, and the resultant environment from interaction of the lithosphere with the hydrosphere, atmosphere, biosphere, and pedosphere during geological, and ecological timeframes, together with anthropogenic activities. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher, or instructor permission. Cross-listed with GEOL 4010/ENVS 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Spring.

GEOG 4020 - Earth Environments and Human Impacts (3 Credits)
This course examines the multitude of impacts that humans have exerted on Earth's biomes and physical environment in a systems context, including vegetation, animals, soils, water, landforms and the atmosphere. It considers the ways in which climate changes and modifications in land cover have altered the environment, and how such changes will still accelerate in in coming decades. The course also explores emergent topics such as rewilding, novel and no analogue ecosystems, and ecosystem services. Additionally, it assesses the future impact of a growing human population on the planet within a context of the "anthropocene," an era dominated by human activity. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with ENVS 5020, GEOL 4020. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.
Typically Offered: Fall.

GEOG 4060 - Remote Sensing I: Introduction to Environmental Remote Sensing (3 Credits)
An in-depth treatment of the use of aerial photographs and other forms of imagery for the analysis of urban-industrial patterns, vegetation, agriculture, landforms, and geologic structure. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 2080 with a grade of C or better. Cross-listed with GEOG 5060. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 2080 with a grade of C or better
Typically Offered: Fall, Spring, Summer.

GEOG 4070 - Remote Sensing II: Advanced Remote Sensing (3 Credits)
Focuses on digital image processing of satellite and aerial images. Students explore the nature of digital image data, gain an understanding of image analysis using PCs, and learn about the use of analysis products in the development of GIS databases. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4060/5060 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5070. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4060 or GEOG 5060 or GEOL 4060 or GEOL 5060, with a grade of C or better
Typically Offered: Spring.

GEOG 4080 - Introduction to GIS (3 Credits)
Introduces Geographic Information Systems (GIS), including justification, hardware/software, database design, and data conversion. GIS is a computer-based mapping system providing a graphical interface to locational and relational attribute data. Includes hands-on use of a GIS workstation. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 2080 or LDAR 4432/5532 with a C or higher. Cross-listed with GEOG 5080. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 2080 or LDAR 4432/5532 with a C or higher.
Typically Offered: Fall, Spring, Summer.

GEOG 4081 - Cartography (3 Credits)
Provides an introduction to the art and science of cartography (map making). Students will learn about design principles, tools and techniques of map production, culminating in the creation of a high-quality map through hands-on exercises. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better. Cross-listed with GEOG 5081. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Fall, Spring.

GEOG 4085 - GIS Applications for the Urban Environment (3 Credits)
Takes a more detailed look at basic concepts presented in the introductory GIS course, concentrating on how GIS is used to solve real-world geographic problems. Various GIS applications within both the natural and social sciences are highlighted. The selection of specific topics is flexible, based on the interests of enrolled students. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5085. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4086 - FOSS4G Systems Integration (3 Credits)
Focuses on the integration of different FOSS4G (Free and Open Source Software for Geospatial Applications) software and technologies to create geospatial information systems that access data from different sources, storage structures, and formats to provide information to support decision making processes. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4091 or 5091, and GEOG 4092 or 5092 with a C or higher. Cross-listed with GEOG 5086. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4091 or 5091, and GEOG 4092 or 5092 with a C or higher.

GEOG 4090 - Environmental Modeling with Geographic Information Systems (3 Credits)
Applies raster spatial analysis and modeling to study processes and spatial relationships to support decision making in natural and built environments. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5090. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Fall.

GEOG 4091 - Open Source Software for Geospatial Applications (3 Credits)
Students will master the individual use and integration of a stack of the most powerful Free and Open Source Software for Geospatial Applications (FOSS4G) to analyze spatial problems and create Spatial Data Infrastructures in different technological, socio-economic and organizational settings. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better, or permission of the instructor. Cross-listed with GEOG 5091. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4092 - GIS Programming and Automation (3 Credits)
Students will learn the most commonly used programming language to automate GIS geoprocessing tasks and workflows in the latest versions of the most popular GIS systems. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Cross-listed with GEOG 5092. Prereq: grade of B- or higher in GEOG 4080 or 5080 or similar course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: grade of B- or higher in GEOG 4080 or 5080 or similar course
Typically Offered: Fall.

GEOG 4095 - Deploying GIS Functionality on the Web (3 Credits)
Covers the core principles and technologies that allow the deployment of geographic information system (GIS) functionality over the World Wide Web. Hands-on exercises make use of the latest commercial software as well as open source technologies. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, computer science background, or permission of instructor. Cross-listed with GEOG 5095. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4220 - Environmental Impact Assessment (3 Credits)
The objective of this course is to provide the foundation for understanding the environmental impact assessment process, its legal context, and the criteria and methods for procedural and substantive compliance. Cross-listed with GEOG 5220, URPL 6549. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4230 - Hazard Mitigation and Vulnerability Assessment (3 Credits)
Examines hazard mitigation and its planning and policy implications, emphasizing how vulnerability assessments play an integral role. Students explore how mitigation minimizes the impacts from hazards and use GIS to conduct a local study. Cross-listed with GEOG 5230. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4235 - GIS Applications in the Health Sciences (3 Credits)
Examines how GIS is used throughout the health care industry and public health. Covers environmental health, disease surveillance, and health services research. Students critically review current literature and gain hands-on experience with GIS software. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Note: this course assumes that students have completed GEOG 4080 or GEOG 5080 and/or have a background in public health. Cross-listed with GEOG 5235, HBSC 7235. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4240 - Applied Geomorphology (3 Credits)
Uses hands-on tasks and field trips to investigate processes behind Earth's changing landforms in a variety of physical landscapes(aeolian, volcanic, coastal, fluvial, karst, glacial and periglacial) as related to rock decay, soils and climatic forcings. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOL 4240, 5240 and GEOG 5240. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4251 - Fluvial Geomorphology (3 Credits)
Examines interactions between Earth's surface and flowing water across spatial and temporal scales. Considers structure and function of the major components of fluvial systems, with particular attention to the variety of fluvial systems to hydrologic, geologic and anthropogenic controls. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. GEOG 3232 is strongly recommended, though not required. Cross-listed with GEOG 5251, GEOL 4251 and GEOL 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4260 - Energy and Natural Resource Planning (3 Credits)
This course provides an overview of the issues associated with energy and natural resource planning. Topics include: energy policy; alternative energy development; water resources; extraction/mining; natural resource protection and regulation; resource management, policies, politics, and technologies. Cross-listed with URPL 6510. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4265 - Sustainability in Resources Management (3 Credits)
Sustainability and sustainable development are the dominant economic, environmental and social issues of the 21st century. Follows a multi-disciplinary approach to these concepts. Case studies demonstrate their implementation in different geographical, ecological and socio-economic conditions worldwide. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq: ENVS 1044 and ENVS 1045 or ENVS 1042 with a C- or higher. Cross-listed with GEOG 5265. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: ENVS 1044 and ENVS 1045 or ENVS 1042 with a C- or higher.

GEOG 4270 - Glacial Geomorphology (3 Credits)
Provides an in-depth view of the processes and systems found in glacial environments. Topics include: evidence of past glaciation; present-day glacial extent; glacier dynamics; glacial erosional processes and landforms; glacial depositional processes and landforms. Note: this course assumes that students have completed GEOG 1202 or GEOL 1072. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOG 5270, GEOL 4270 and GEOL 5270. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4280 - Environmental Hydrology (4 Credits)
Examination of hydrologic processes in relation to climate, soils, vegetation, land-use practices, and human interactions. Natural scientific perspectives emphasized; field and laboratory included. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with GEOL 4280 and ENVS 5280. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.

GEOG 4301 - Population, Culture, and Resources (3 Credits)
World populations are examined in the context of local, regional and global resources. Opposing viewpoints are studied, and students are required to complete a case study of self-selected country. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Students may not receive credit for this course if they have already received credit for GEOG 3301. Prereq: GEOG 1302 or ENVS 1342 with a C- or higher or instructor consent. Cross-listed with GEOG 5301. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 1302 or ENVS 1342 with a C- or higher or instructor consent.
Typically Offered: Fall, Spring.

GEOG 4305 - Water Quality and Resources (3 Credits)
Introduces water resources aimed at students with little or no background in the field. This is a broad course covering topics ranging from the physical aspects of water to water politics and international law. While the course is largely a lecture format, discussion of current issues is a significant part of the class. Cross-listed with ENVS 5305. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4335 - Contemporary Environmental Issues (3 Credits)
Provides an overview of environmental challenges facing society today, focusing on how humans impact and change the environment. Opposing views and environmental policy at the local, state, national, and international levels are explored. Cross-listed with GEOG 5335. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4350 - Environment and Society in the American Past (3 Credits)
Overview of the geographical development of North American society from the late 15th century to the mid-20th century. A comparative regional approach emphasizing relationships between natural resource exploitation, cultural landscape formation and environmental change. Cross-listed with GEOG 5350. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4380 - Anthropocene Futures (3 Credits)
We are living in the "Anthropocene"—an era of rapid environmental and societal changes, and of decline and loss resulting from accelerating human interactions with Earth systems. Warming climates, wildfires, floods, water and food insecurity, novel ecosystems, and even pandemics such as COVID-19, are phenomena of the Anthropocene. With a still growing human population and a finite planet, understanding and overcoming such challenges is more pressing than ever, if people are to co-evolve with Earth toward a sustainable future. This interdisciplinary seminar course tells the scientific story of humanity's intensifying interactions with the planet and explores possible future paths. Through presentations, readings and discussion, students will examine topics that include the origin and significance of Anthropocene in Earth's evolutionary history, the debates and evidences for a new geologic epoch, large-scale trajectories of environmental change, a safe operating space, and planting seeds for a "good" Anthropocene. In doing so, students will acquire skills and experiences in critical thinking and analytical reasoning to grapple with many uncertainties and tensions of the Anthropocene. Cross-listed with GEOG 5380, ENVS 4380, and ENVS 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4420 - The Politics of Nature (3 Credits)
Examines how economic systems, scientific discovery, institutional policies, and environmental knowledge converge to shape the environment and mediate the way societies understand, manage and respond to environmental changes in both the United States and the developing world. Cross-listed with GEOG 5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4440 - Science, Policy and the Environment (3 Credits)
Examines the social, economic and political forces shaping scientific discovery and the development and enforcement of environmental policy. Students will examine perspectives on issues such as risk, expertise, uncertainty and objectivity that influence the problem-defining, standard-setting and policy-making process. Cross-listed with GEOG 5440. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4450 - Urban Food and Agriculture: Perspectives and Research (3 Credits)
Provides an overview of research & practices in urban farming. Critically reviews emergent models of local food production/distribution. Compares new practices to traditional agribusiness. Assesses the prospects for solving sustainability problems within the modern agro-food system. Cross-listed with ENVS 5450. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4460 - Sustainable Urban Agriculture Field Study I (3 Credits)
Provides a field-based overview of urban farm planning & management. Topics: range/land conservation, native/invasive species, water distribution, animal husbandry, government interaction, local markets, community relations, conservation easements and issues pertaining to urban farming. Note: this course assumes that students have completed GEOG 4450. Cross-listed with ENVS 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4470 - Sustainable Urban Agriculture Field Study II (3 Credits)
Provides a field-based overview of current practices in local agricultural production. Emphasis will be placed on sustainable practices and their most efficient situation, Special consideration will be given to plausible solutions for food insecure communities both local and global. Note: this course assumes that students have completed GEOG 4450 and 4460. Cross-listed with ENVS 5470. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4625 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color — all fought for their own "right to the city". Cross-listed with HIST 4225, HIST 5225, WGST 4225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4640 - Urban Geography: Denver and the U.S. (3 Credits)
Uses a combined lecture/seminar format to explore research themes in urban geography. Topics covered include both historical and contemporary processes of urban development and transformation. Particular emphasis is placed on the U.S. and Colorado's Front Range. Cross-listed with GEOG 5640. Prereq: GEOG 1602 with a grade of C- or higher or permission from instructor. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 1602 with a grade of C- or higher.
Typically Offered: Spring.

GEOG 4680 - Urban Sustainability: Perspectives and Practice (3 Credits)
Examines various perspectives on sustainability, including ambiguities and opportunities of sustainability as a conceptual framework. Class also examines what sustainability looks like in practice, using numerous topics such as poverty and urban farming to water and climate change. Cross-listed with GEOG 5680. Prereq: ENVS 1342 or GEOG 1602 with a grade of C- or higher or permission from instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1342 or GEOG 1602 with a grade of C- or higher.
Typically Offered: Fall.

GEOG 4710 - Disasters, Climate Change, and Health (3 Credits)
Provides a review of the impacts of disasters and climate change on human health, using a broad framework of preparedness, mitigation, response, recovery, and adaptation. Note: this course assumes that students have completed GEOG 3501. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4720 - Climate Change: Causes, Impacts and Solutions (3 Credits)
Examines science behind past, present & future climate change & environmental, social & political implications & solutions. Explores recent scientific research, syntheses & mainstream literature advancing knowledge about causes & consequences of natural & anthropogenic climate change. Prereq: GEOG 3232 with a C- or higher. Cross-listed with GEOG 5720/ ENVS 4720/ ENVS 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.

GEOG 4731 - Mountain Biogeography (4 Credits)
This hands-on research course will focus on the current and past distribution of plants and changes in disturbance regimes in the mountains using environmental proxy data preserved in lake sediment cores. A field trip will occur early in the semester. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with ENVS 5731. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall.

GEOG 4740 - Soil Science and Geography (3 Credits)
Reviews chemical and physical properties of soils, soil development, and geographic distributions of soil types in the context of the role that soils play in natural and human-altered ecosystems. Cross-listed with GEOG 5740, ENVS 4740, ENVS 5740. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4750 - Beeography: Geography of Bees (4 Credits)
Beeography is an introduction to the bee world and the amazing diversity in Colorado and beyond. The course will examine the distribution of bees and the pressures they face in different environmental and cultural contexts. It will examine different methods to support and increase bee populations and pollination services, especially in populated environments, including backyard beekeeping of honeybee and native bee populations. Field and lab activities will include beekeeping, native bee collection and identification, bee dissections, pollen processing and identification, and trips to area bee museum collections and apiaries. Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with GEOG 5750, ENVS 4750, and ENVS 5750. Term offered: summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Summer.

GEOG 4757 - Urban Climate and Air Quality (3 Credits)
Explores how people alter climates on micro- to regional scales, and how this in turn affects human health and society. Focusses on recent scientific research, physical processes within cities, and the role of urbanization in global climate change. Cross-listed with GEOG 4757, GEOG 5757, ENVS 4757, and ENVS 5757. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4840 - Independent Study: GEOG (1-3 Credits)
Independent research primarily for undergraduate majors. Prereq: Permission of department. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

GEOG 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOG 4950 - Honors Thesis (3 Credits)
A capstone course designed to promote critical thinking, research methodology, and writing/oral presentation skills. Students design and develop a research project under the supervision of a faculty advisor. Each student gives an oral presentation or defense of his or her thesis at the end of the semester in which they enroll. Prereq: Junior standing or higher. Department consent required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Additional Information: Report as Full Time.

GEOG 4990 - Special Topics (1-6 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOG 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with ENVS 4995, ENVS 5995, and GEOG 5995. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Geology (GEOL)

GEOL 1073 - Physical Geology: Surface Processes (3 Credits)
This survey course develops a basic understanding of surface processes and landforms in geology. It includes one all-day field trip. Students must also take the accompanying laboratory GEOL 1074. No co-credit with GEOL 1072. Prereq or Coreq: GEOL 1074. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Co-req: GEOL 1074
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.

GEOL 1074 - Physical Geology: Surface Processes Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in surface processes and landforms in geology. Students must also take the accompanying lecture GEOL 1073. Prereq or Coreq: GEOL 1073. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1073
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.

GEOL 1083 - Physical Geology: Internal Processes (3 Credits)
This survey course develops a basic understanding of physical geology emphasizing the earth's interior, covering internal processes and properties, with plate tectonics as the underlying theme, Includes one all-day field trip. Students must also take the accompanying laboratory GEOL 1084. No co-credit with GEOL 1082. Prereq or Coreq: GEOL 1084. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1084
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.

GEOL 1084 - Physical Geology: Internal Processes Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in internal geologic processes and properties of the earth's interior with plate tectonics as the underlying theme. Prereq or Coreq: GEOL 1083. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1083
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.

GEOL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

GEOL 1202 - Introduction to Oceanography (3 Credits)
Surveys modern scientific knowledge of the world's oceans. Intended for non-science students, the course offers a non-quantitative introduction to the major facts and principles of physical, chemical, biological, and geological oceanography. The impact of natural and anthropic events on the marine environment are included. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOL 1840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

GEOL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOL 3032 - Geology of Colorado (3 Credits)
Introductory course focused on the geology of Colorado. The course is divided into two parts: the first half covers general principles of geology, and the second is devoted to the observation of rock types, structures, and geologic relationships in the field. Discussion of plate tectonics, rock formation, construction and interpretation of geologic maps, the geologic time scale, geologic provinces of Colorado, evolution of major landforms, formation and development of mineral resources of Colorado, and current topics in environmental geology. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOL 3840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOL 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

GEOL 4010 - Landscape Biogeochemistry (3 Credits)
A holistic approach to studying the role chemical elements play in synthesis/decomposition cycles, and the resultant environment from interaction of the lithosphere with the hydrosphere, atmosphere, biosphere, and pedosphere during geological, and ecological timeframes, together with anthropogenic activities. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher, or instructor permission. Cross-listed with GEOG 4010 and ENVS 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Spring.

GEOL 4020 - Earth Environments and Human Impacts (3 Credits)
This course examines the multitude of impacts that humans have exerted on Earth's biomes and physical environment in a systems context, including vegetation, animals, soils, water, landforms and the atmosphere. It considers the ways in which climate changes and modifications in land cover have altered the environment, and how such changes will still accelerate in in coming decades. The course also explores emergent topics such as rewilding, novel and no analogue ecosystems, and ecosystem services. Additionally, it assesses the future impact of a growing human population on the planet within a context of the "anthropocene," an era dominated by human activity. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with ENVS 5020, GEOG 4020. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.
Typically Offered: Fall.

GEOL 4240 - Applied Geomorphology (3 Credits)
Uses hands-on tasks and field trips to investigate processes behind Earth's changing landforms in a variety of physical landscapes(aeolian, volcanic, coastal, fluvial, karst, glacial and periglacial) as related to rock decay, soils and climatic forcings. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOG 4240, 5240 and GEOL 5240. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4251 - Fluvial Geomorphology (3 Credits)
Examines interactions between Earth's surface and flowing water across spatial and temporal scales. Considers structure and function of the major components of fluvial systems, with particular attention to the variety of fluvial systems to hydrologic, geologic and anthropogenic controls. Cross-listed with GEOG 4251, GEOG 5251 and GEOL 5251. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. GEOG 3232 is strongly recommended, though not required. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4270 - Glacial Geomorphology (3 Credits)
Provides an in-depth view of the processes and systems found in glacial environments. Topics include: evidence of past glaciation; present-day glacial extent; glacier dynamics; glacial erosional processes and landforms; glacial depositional processes and landforms. Prereq: GEOL 1073 and 1074 or GEOL 1072 with a C- or better. Cross-listed with GEOG 4270, GEOG 5270 and GEOL 5270. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

GEOL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOL 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 and GEOL 1083 and GEOL 1084 or GEOL 1082 with a C or higher and instructor permission. Cross-listed with GEOL 5995. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 and GEOL 1083 and GEOL 1084 or GEOL 1082 with a C or higher and instructor permission.

GEOL 5001 - RM-MSMSP. Earth Processes I (4 Credits)
Systematic study of geological concepts, rock and mineral formation, plate tectonics, volcanism and earthquakes, landforms and weathering, historical environmental interpretation. Includes a field component. This course is not applicable toward any degree in the College of Liberal Arts and Sciences. Note: students should obtain permission of project director prior to enrolling in this course. Prereq: Graduate standing. Max hours: 4 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 5002 - RM-MSMSP: Earth Sciences II - Sedimentology and Paleontology (4 Credits)
Field and lecture course building on Earth Sciences I, which covers internal earth processes. Students learn about erosional processes and how sedimentary rocks are deposited and may be preserved; the different ways fossils are preserved; describing rocks in the field; and collecting, preparing and describing fossils. Provides an overview of the geology of the area so that students can place the detailed studies in context. This course is not applicable toward any degree in the College of Liberal Arts and Sciences. Prereq: GEOL 5001 with a B- or higher. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 5001 with a B- or higher.

GEOL 5003 - RM-MSMSP: Earth Science in Context (4 Credits)
Designed for teachers in the RM-MSMSP program. Topics include global climate change, glaciers, coastal geology, volcanism, and their effects on culture. Monuments such as Florissant Fossil Beds, Ice Core, Cave of the Winds and a quarry will be visited. Note: This course is not applicable toward any degree in the College of Liberal Arts and Sciences. Prereq: Graduate standing. Max hours: 4 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 5004 - RM-MSMSP Research Experience for Teachers - Geology Cohort (1-6 Credits)
A five-week research exploration in which RM-MSMSP teachers will raise their level of relevant scientific understanding by engaging in a "hands-on" workshop, transforming what they have learned into new curricular materials that will improve the scientific abilities of their students and hopefully stimulate them to consider a STEM career. Note: credit may not apply toward any CLAS degree. Prereq: Graduate standing. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 5240 - Applied Geomorphology (3 Credits)
Uses hands-on tasks and field trips to investigate processes behind Earth's changing landforms in a variety of physical landscapes(aeolian, volcanic, coastal, fluvial, karst, glacial and periglacial) as related to rock decay, soils and climatic forcings. Note: this course assumes that students have completed GEOG 1202 or GEOL 1072 and GEOG 3232. Prereq: Graduate standing. Cross-listed with GEOG 4240, 5240 and GEOL 4240. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Typically Offered: Fall.

GEOL 5251 - Fluvial Geomorphology (3 Credits)
Examines interactions between Earth's surface and flowing water across spatial and temporal scales. Considers structure and function of the major components of fluvial systems, with particular attention to the variety of fluvial systems to hydrologic, geologic and anthropogenic controls. Cross-listed with GEOG 4251, GEOG 5251 and GEOL 4251.
Restriction: Restricted to Graduate and Graduate Non-Degree students. GEOG 3232 is strongly recommended, though not required. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Typically Offered: Fall.

GEOL 5270 - Glacial Geomorphology (3 Credits)
Provides an in-depth view of the processes and systems found in glacial environments. Topics include: evidence of past glaciation; present-day glacial extent; glacier dynamics; glacial erosional processes and landforms; glacial depositional processes and landforms. Note: this course assumes that students have completed GEOG 1202 or GEOL 1072. Prereq: Graduate standing. Cross-listed with GEOG 4270, GEOG 5270 and GEOL 4270. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 5880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOL 5939 - Internship (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Prereq: Graduate standing. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 5950 - Master's Thesis (1-8 Credits)
Department consent required. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Prereq: Graduate standing. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 8.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Additional Information: Report as Full Time.

GEOL 5995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Prereq: Graduate standing. Cross-listed with GEOL 4995. Repeatable. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 6840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Prereq: Graduate standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors

GEOL 6950 - Master's Thesis (1-8 Credits)
Department consent required. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Prereq: Graduate standing. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 8.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Additional Information: Report as Full Time.

GEOL 6960 - Master's Project (1-8 Credits)
Department consent required. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Prereq: Graduate standing. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 8.
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Additional Information: Report as Full Time.

Environmental Sciences (ENVS)

ENVS 1044 - Introduction to Environmental Sciences (3 Credits)
This survey course develops a basic understanding of ecological relationships and environmental systems. Issues such as the effects of human activities on earth's environment, extinction or diversity, greenhouse effect, hazardous or toxic wastes and human population growth are discussed. Students must also take the accompanying laboratory ENVS 1045. No co-credit with ENVS 1042. Prereq or Coreq: ENVS 1045. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or co-req: ENVS 1045
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

ENVS 1045 - Introduction to Environmental Sciences Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in environmental science. Students must also take the accompanying lecture ENVS 1044. No co-credit with ENVS 1042. Prereq or Coreq: ENVS 1044. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: ENVS 1044
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

ENVS 1342 - Environment, Society and Sustainability (3 Credits)
Overview of perspectives on environmental issues within the context of sustainable development and taking a systems approach. The focus is on social science approaches to explore the human footprint on the earth, environmentalism, scientific uncertainty, policy creation and social change. Note: This course is a prerequisite for GEOG 4680 Urban Sustainability: Perspectives and Practice. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography.
Typically Offered: Fall, Spring, Summer.

ENVS 2939 - Internship (3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

ENVS 3082 - Energy and the Environment (3 Credits)
For students of various backgrounds who wish to increase their understanding of the environmental and technical issues of supplying the energy demands of our society. Alternative energy sources and conservation are explored as solutions to promote a sustainable society. Note: One college-level science course and MATH 1110 or equivalent are strongly recommended as preparation for optimal student success. Cross-listed with PHYS 3082. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 3232 - Weather and Climate (3 Credits)
Introduces the processes and systems that govern both day-to-day weather and longer-term climate variations. Covers instrumentation and weather forecasting techniques. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with GEOG 3232. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

ENVS 3500 - Topics in Environmental Sciences (1-6 Credits)
Note: Topics may vary from one offering to the next. Repeatable.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENVS 4380 - Anthropocene Futures (3 Credits)
We are living in the "Anthropocene"—an era of rapid environmental and societal changes, and of decline and loss resulting from accelerating human interactions with Earth systems. Warming climates, wildfires, floods, water and food insecurity, novel ecosystems, and even pandemics such as COVID-19, are phenomena of the Anthropocene. With a still growing human population and a finite planet, understanding and overcoming such challenges is more pressing than ever, if people are to co-evolve with Earth toward a sustainable future. This interdisciplinary seminar course tells the scientific story of humanity's intensifying interactions with the planet and explores possible future paths. Through presentations, readings and discussion, students will examine topics that include the origin and significance of Anthropocene in Earth's evolutionary history, the debates and evidences for a new geologic epoch, large-scale trajectories of environmental change, a safe operating space, and planting seeds for a "good" Anthropocene. In doing so, students will acquire skills and experiences in critical thinking and analytical reasoning to grapple with many uncertainties and tensions of the Anthropocene. Cross-listed with GEOG 4380, GEOG 5380, and ENVS 5380. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 4500 - Topics In Environmental Sciences (1-6 Credits)
Note: Topics may vary from one offering to the next. Note: Necessary prior coursework varies according to the topic. Students should consult with the instructor. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4650 - Environmental Education (3 Credits)
This course links the theory and practice of environmental education to inform curricular development and pedagogical knowledge. Cross-listed with ENVS 5650 and SCED 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENVS 4720 - Climate Change: Causes, Impacts and Solutions (3 Credits)
Examines science behind past, present & future climate change & environmental, social & political implications & solutions. Explores recent scientific research, syntheses & mainstream literature advancing knowledge about causes & consequences of natural & anthropogenic climate change. Prereq: GEOG 3232 with a C- or higher. Cross-listed with GEOG 4720/ GEOG 5720/ ENVS 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.

ENVS 4740 - Soil Science and Geography (3 Credits)
Reviews chemical and physical properties of soils, soil development, and geographic distributions of soil types in the context of the role that soils play in natural and human-altered ecosystems. Cross-listed with GEOG 4740, GEOG 5740, ENVS 5740. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 4750 - Beeography: Geography of Bees (4 Credits)
Beeography is an introduction to the bee world and the amazing diversity in Colorado and beyond. The course will examine the distribution of bees and the pressures they face in different environmental and cultural contexts. It will examine different methods to support and increase bee populations and pollination services, especially in populated environments, including backyard beekeeping of honeybee and native bee populations. Field and lab activities will include beekeeping, native bee collection and identification, bee dissections, pollen processing and identification, and trips to area bee museum collections and apiaries. Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with GEOG 4750, GEOG 5750, and ENVS 5750. Term offered: summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Summer.

ENVS 4757 - Urban Climate and Air Quality (3 Credits)
Explores how people alter climates on micro- to regional scales, and how this in turn affects human health and society. Focusses on recent scientific research, physical processes within cities, and the role of urbanization in global climate change. Cross-listed with GEOG 4757, GEOG 5757, ENVS 4757, and ENVS 5757. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENVS 4780 - Aquatic Ecology (3 Credits)
This course explores the physical, chemical, and biological (including human) properties of aquatic ecosystems, and how the interrelationships between these properties define and influence advanced ecological processes. Special focus is given to lakes, reservoirs, wetlands, streams, rivers, and groundwater. Learning is facilitated through lectures, discussions, student presentations, laboratory and data exercises, and periodic (often virtual) field excursions. Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher. Cross-listed with ENVS 5780, BIOL 4780, and BIOL 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher.

ENVS 4840 - Independent Study: ENVS (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Geography, BA

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

The Geography program (within the Department of Geography and Environmental Sciences) offers a BA degree that includes a full range of courses in the fundamentals of geography taught mainly by full-time faculty.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 33 credit hours from approved courses.
2. Students must complete a minimum of 24 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 credit hours of approved coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Only three credits of Travel Study may be counted toward graduation requirements.
2. Undergraduate students may count up to 6 credit hours of independent study or internship (any combination of GEOG 3840 Independent Study: GEOG, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research, or GEOG 3939 Internship) towards elective credit in the major as approved by the undergraduate coordinator. Students may not receive more than three credit hours per independent study section. No more than three credit hours of independent study may be taken with the same instructor or in the same term.
3. GEOG 3939 Internship: Community/Professional Experience optional, but highly recommended.

Code	Title	Hours
Complete all of the following required courses:		*15-16*
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
or GEOG 1202	Introduction to Physical Geography	
GEOG 1102	World Regions Global Context	
or GEOG 1302	Introduction to Human Geography	
GEOG 2080	Introduction to Mapping and Map Analysis	
GEOG/ENVS 3232	Weather and Climate	
GEOG 3412	Globalization and Regional Development	
Complete a minimum of one course from each of the following focus areas:		*12*
Environment, Society, and Sustainability (p. 518)		
Human Geography (p. 518)		
Physical Geography (p. 518)		

Techniques of Geographical Analysis (p. 519)	
Complete six additional GEOG elective credits. Students can choose additional courses from the approved focus areas lists or may choose other GEOG electives of interest.	*6*
Total Hours	**33-34**

Environment, Society, and Sustainability

Code	Title	Hours
Complete one of the following Environment, Society, and Sustainability courses.		*3*
ENVS 1342	Environment, Society and Sustainability	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4265	Sustainability in Resources Management	
GEOG 4335	Contemporary Environmental Issues	
GEOG 4350	Environment and Society in the American Past	
GEOG/ENVS 4380	Anthropocene Futures	
GEOG 4420	The Politics of Nature	
GEOG 4440	Science, Policy and the Environment	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
Total Hours		**3**

Human Geography

Code	Title	Hours
Complete one of the following Human Geography courses.		*3*
GEOG 1302	Introduction to Human Geography	
GEOG 1602	Urban Studies and Planning	
GEOG 3100	Geography of Colorado	
GEOG 3140	Geography of South America	
GEOG 3401	Geography of Food and Agriculture	
GEOG 3501	Geography of Health	
GEOG 4301	Population, Culture, and Resources	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4710	Disasters, Climate Change, and Health	
Total Hours		**3**

Physical Geography

Code	Title	Hours
Complete one of the following Physical Geography courses.		*3*
GEOG 3240	Colorado Climates	
GEOG/GEOL 4010	Landscape Biogeochemistry	
GEOG/GEOL 4020	Earth Environments and Human Impacts	
GEOG/GEOL 4240	Applied Geomorphology	
GEOG/GEOL 4251	Fluvial Geomorphology	
GEOG/GEOL 4270	Glacial Geomorphology	
GEOG 4280	Environmental Hydrology	
GEOG 4305	Water Quality and Resources	
GEOG/ENVS 4720	Climate Change: Causes, Impacts and Solutions	
GEOG 4731	Mountain Biogeography	
GEOG/ENVS 4740	Soil Science and Geography	
GEOG/ENVS 4750	Beeography: Geography of Bees	

GEOG 4757	Urban Climate and Air Quality
Total Hours	**3**

Techniques of Geographical Analysis

Code	Title	Hours
Complete one of the following Techniques of Geographical Analysis courses.		*3*
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4070	Remote Sensing II: Advanced Remote Sensing	
GEOG 4080	Introduction to GIS (highly recommended; pre-req to most of the advanced GISci courses)	
GEOG 4081	Cartography	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4090	Environmental Modeling with Geographic Information Systems	
GEOG 4091	Open Source Software for Geospatial Applications	
GEOG 4092	GIS Programming and Automation	
GEOG 4095	Deploying GIS Functionality on the Web	
GEOG 4220	Environmental Impact Assessment	
GEOG 4235	GIS Applications in the Health Sciences	
Total Hours		**3**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/bachelor-arts/learning-goals-outcomes/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Geography - Environment, Society and Sustainability Option, BA

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

The Geography program (within the Department of Geography and Environmental Sciences) offers a BA degree that includes a full range of courses in the fundamentals of geography taught mainly by full-time faculty.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 credit hours from approved courses.
2. Students must complete a minimum of 24 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 credit hours of approved coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Only three credits of Travel Study may be counted toward graduation requirements.
2. Undergraduate students may count up to 6 credit hours of independent study or internship (any combination of GEOG 3840 Independent Study: GEOG, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research, or GEOG 3939 Internship) towards elective credit in the major as approved by the undergraduate coordinator. Students may not receive more than three credit hours per independent study section. No more than three credit hours of independent study may be taken with the same instructor or in the same term.
3. GEOG 3939 Internship: Community/Professional Experience optional, but highly recommended.

Code	Title	Hours
Complete all of the following required courses:		*21-22*
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
or GEOG 1202	Introduction to Physical Geography	
ENVS 1342	Environment, Society and Sustainability	
GEOG 1102	World Regions Global Context	
or GEOG 1302	Introduction to Human Geography	
GEOG 2080	Introduction to Mapping and Map Analysis	
GEOG/ENVS 3232	Weather and Climate	
GEOG 3412	Globalization and Regional Development	
GEOG 4335	Contemporary Environmental Issues	
Complete two of the following Environment, Society and Sustainability electives:		*6*
GEOG 4265	Sustainability in Resources Management	

GEOG 4301	Population, Culture, and Resources	
GEOG 4380	Anthropocene Futures	
GEOG 4420	The Politics of Nature	
GEOG 4440	Science, Policy and the Environment	
Complete three of the following Environmental Studies electives, not already completed:		*9*
GEOG 3401	Geography of Food and Agriculture	
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4265	Sustainability in Resources Management	
GEOG 4301	Population, Culture, and Resources	
GEOG 4305	Water Quality and Resources	
GEOG 4350	Environment and Society in the American Past	
GEOG 4420	The Politics of Nature	
GEOG 4440	Science, Policy and the Environment	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
GEOG 4710	Disasters, Climate Change, and Health	
GEOG/ENVS 4720	Climate Change: Causes, Impacts and Solutions	
Complete one of the following Techniques for Environmental Analysis courses:		*3*
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4080	Introduction to GIS	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4235	GIS Applications in the Health Sciences	
Total Hours		**39-40**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/bachelor-arts/learning-goals-outcomes/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Geography - Environmental Science Option, BA

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

The Geography program (within the Department of Geography and Environmental Sciences) offers a BA degree that includes a full range of courses in the fundamentals of geography taught mainly by full-time faculty.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 45 credit hours from approved courses.
2. Students must complete a minimum of 24 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 GEOG, GEOL or ENVS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Only three credits of Travel Study may be counted toward graduation requirements.
2. Undergraduate students may count up to 6 credit hours of independent study or internship (any combination of GEOG 3840 Independent Study: GEOG, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research, or GEOG 3939 Internship) towards elective credit in the major as approved by the undergraduate coordinator. Students may not receive more than three credit hours per independent study section. No more than three credit hours of independent study may be taken with the same instructor or in the same term.
3. GEOG 3939 Internship: Community/Professional Experience optional, but highly recommended.

Code	Title	Hours
Complete all of the following required courses:		*25*
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
GEOG 1102	World Regions Global Context	
or GEOG 1302	Introduction to Human Geography	
GEOG 1202	Introduction to Physical Geography	
GEOG 2080	Introduction to Mapping and Map Analysis	
GEOG/ENVS 3232	Weather and Climate	
GEOG 3412	Globalization and Regional Development	
GEOG 4020	Earth Environments and Human Impacts	
GEOG 4265	Sustainability in Resources Management	
Complete one of the following Quantitative Methods courses:		*3*
ANTH 4050	Quantitative Methods in Anthropology	

BANA 2010	Business Statistics	
MATH 2830	Introductory Statistics	
PSYC 2090	Statistics and Research Methods	
Complete one of the following Geo-Spatial Analysis courses:		*3*
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing [1]	
GEOG 4080	Introduction to GIS [2]	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4235	GIS Applications in the Health Sciences	
Complete one of the following Environmental Science Elective Courses:		*3*
GEOG 3240	Colorado Climates	
GEOG 4010	Landscape Biogeochemistry	
GEOG/GEOL 4240	Applied Geomorphology	
GEOG/GEOL 4251	Fluvial Geomorphology	
GEOG/GEOL 4270	Glacial Geomorphology	
GEOG 4280	Environmental Hydrology	
GEOG 4305	Water Quality and Resources	
GEOG/ENVS 4720	Climate Change: Causes, Impacts and Solutions	
GEOG 4731	Mountain Biogeography	
GEOG/ENVS 4740	Soil Science and Geography	
Complete an Introductory Biology or Chemistry Sequence. Complete the general biology or general chemistry sequence. If applying to the MS in Environmental Sciences program, students are advised to take both sequences.		*8*
General Biology Sequence [3]		
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	
General Chemistry Sequence [3]		
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
Complete a minimum of one upper-division Biology or Chemistry elective course related to the student's Environmental Science interest, from the approved list.		*3*
Upper-Division Biology or Chemistry electives (p. 524)		
Total Hours		**45**

1 pre-req for Remote Sensing II

2 highly recommended; pre-req to most of the advanced GIS courses

3 Honors and majors versions of General Biology and General Chemistry will apply.
BIOL 2030 Honors Organisms to Ecosystems (Gen Bio) is equivalent to BIOL 2010 Organisms to Ecosystems (Gen Bio)
BIOL 2040 Honors Molecules to Cells (Gen Bio) is equivalent to BIOL 2020 Molecules to Cells (Gen Bio)
BIOL 2031 Honors Organisms to Ecosystems Lab (Gen Bio) is equivalent to BIOL 2011 Organisms to Ecosystems Lab (Gen Bio)
BIOL 2041 Honors Molecules to Cells Lab (Gen Bio) is equivalent to BIOL 2021 Molecules to Cells Lab (Gen Bio)
CHEM 2081 Honors General Chemistry I is equivalent to CHEM 2031 General Chemistry I
CHEM 2091 Honors General Chemistry II Lecture is equivalent to CHEM 2061 General Chemistry II
CHEM 2088 Honors General Chemistry I Laboratory and CHEM 2039 Majors General Chemistry I Laboratory are equivalent to CHEM 2038 General Chemistry Laboratory I
CHEM 2098 Honors General Chemistry II Laboratory and CHEM 2069 Majors General Chemistry II Laboratory are equivalent to CHEM 2068 General Chemistry Laboratory II

Upper-Division Biology or Chemistry Electives

Code	Title	Hours
Complete one of the following.		*3*
Biology		
BIOL 3074	Human Reproductive Biology	
BIOL 3104	Behavioral Genetics	
BIOL 3124	Introduction to Molecular Biology	
BIOL 3225	Human Physiology	
BIOL 3244	Human Anatomy	
BIOL 3330	Plant Diversity	
BIOL 3411	Principles of Ecology	
BIOL 3445	Introduction to Evolution	
BIOL 3521	Vertebrate Biology	
BIOL 3525	Parasitology	
BIOL 3611	General Cell Biology	
BIOL 3621	Introduction to Immunology	
BIOL 3640	Mammalogy	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 3763	Biostatistics	
BIOL 3804	Developmental Biology	
BIOL 3832	General Genetics	
BIOL 4024	Introduction to Biotechnology	
BIOL 4052	Advanced Ecology	
BIOL 4053	Disease Ecology	
BIOL 4055	Virology	
BIOL 4064	Cell Biology of Disease	
BIOL 4126	Molecular Genetics	
BIOL 4128	Topics in Molecular Biology	
BIOL 4134	Human Genetics	
BIOL 4144	Medical Microbiology	
BIOL 4154	Conservation Biology	
BIOL 4165	Neurobiology	
BIOL 4225	Genomics and Bioinformatics	
BIOL 4250	Mechanisms of Animal Behavior	
BIOL 4335	Plant Structure and Development	
BIOL 4345	Flora of Colorado	
BIOL 4415	Applied Microbial Ecology	
BIOL 4425	Biogeography	
BIOL 4430	Introduction to Spatial Ecology	
BIOL 4460	Environmental Toxicology	
BIOL 4464	Exercise Physiology	
BIOL 4475	Mechanisms of Human Pathology	
BIOL 4494	Population and Evolutionary Genetics	
BIOL 4550	Cell Signaling	
BIOL 4622	Topics in Immunology	
BIOL 4634	Biology of Cancer	
BIOL 4674	Endocrinology	
BIOL 4974	Advanced Evolution	
Biology/Chemistry		
BIOL/CHEM 4815	Structural Biology of Neurodegenerative Diseases	
BIOL/CHEM 4825	Biochemistry of Metabolic Disease	

BIOL/CHEM 4835	Biochemistry of Gene Regulation and Cancer
Chemistry	
CHEM 3011	Inorganic Chemistry
CHEM 3111	Analytical Chemistry
CHEM 3411	Organic Chemistry I
or CHEM 3481	Majors Organic Chemistry I
CHEM 3421	Organic Chemistry II
or CHEM 3491	Majors Organic Chemistry II
CHEM 3810	Biochemistry
CHEM 4010	Advanced Inorganic Chemistry
CHEM 4110	Advanced Analytical Chemistry
CHEM 4121	Instrumental Analysis
CHEM 4221	Practical Applications of Spectroscopy
CHEM 4310	Advanced Organic Chemistry
CHEM 4421	Cannabis Chemistry
CHEM 4500	Foundations of Physical Chemistry
CHEM 4510	Computational Chemistry
CHEM 4511	Physical Chemistry: Thermodynamics and Kinetics
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy
CHEM 4530	Advanced Physical Chemistry
CHEM 4600	Advanced Topics in Chemistry
CHEM 4700	Environmental Chemistry
CHEM 4810	General Biochemistry I
CHEM 4820	General Biochemistry II
CHEM 4845	Molecular Modeling and Drug Design
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine
Total Hours	**3**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/bachelor-arts/learning-goals-outcomes/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Geography - Urban Studies and Planning, BA

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

The Geography program (within the Department of Geography and Environmental Sciences) offers a BA degree that includes a full range of courses in the fundamentals of geography taught mainly by full-time faculty.

Geography and urban planning share a common concern for the spatial configuration of the places we inhabit and enjoy. In recognition of this close association, there is currently an articulation agreement between the Department of Geography and Environmental Sciences and the College of Architecture and Planning that provides students with a mechanism for acceleration through the Master of Urban and Regional Planning (MURP) degree program, if accepted into that graduate program. Those students completing the requirements for an undergraduate planning minor may also be eligible to pursue an accelerated MURP degree. If interested in this option, the student should work closely with the option advisor in selecting coursework. (Please see the Graduate Catalog for more information on this graduate program.)

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 credit hours from approved courses.
2. Students must complete a minimum of 24 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 GEOG, GEOL or ENVS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Only three credits of Travel Study may be counted toward graduation requirements.
2. Undergraduate students may count up to 6 credit hours of independent study or internship (any combination of GEOG 3840 Independent Study: GEOG, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research, or GEOG 3939 Internship) towards elective credit in the major as approved by the undergraduate coordinator. Students may not receive more than three credit hours per independent study section. No more than three credit hours of independent study may be taken with the same instructor or in the same term.
3. This option has an articulation agreement with the Masters in Urban and Regional Planning. If interested, students should check with the option advisor early in the program.
4. GEOG 3939 Internship: Community/Professional Experience optional, but highly recommended.

Code	Title	Hours
Complete all of the following required courses:		*24-25*
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
or GEOG 1202	Introduction to Physical Geography	
GEOG 1102	World Regions Global Context	

or GEOG 1302	Introduction to Human Geography	
GEOG 1602	Urban Studies and Planning	
GEOG 2080	Introduction to Mapping and Map Analysis	
GEOG 3232	Weather and Climate	
GEOG 3412	Globalization and Regional Development	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
Complete four of the following Urban Studies or Planning elective courses:		*12*
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4265	Sustainability in Resources Management	
GEOG/ENVS 4380	Anthropocene Futures	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	
GEOG 4757	Urban Climate and Air Quality	
Students can select up to three of the four elective courses from the following: [3]		
URPL 3000	Planning the Built Environment	
URPL 4000/5000	Planning History and Theory	
URPL 4010/5010	Planning Methods	
URPL 4550/6550	Transportation, Planning and Policy	
URPL 4555/6555	Transportation, Land Use and the Environment	
URPL 4600/6600	Regional Growth and Equity	
Complete one of the following Techniques for Urban Analysis courses:		*3*
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing [1]	
GEOG 4080	Introduction to GIS [2]	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4091	Open Source Software for Geospatial Applications	
GEOG 4095	Deploying GIS Functionality on the Web	
Total Hours		**39-40**

1 pre-req for Remote Sensing II

2 pre-req to most of the advanced GISci courses

3 Students who desire to take URPL 4000-level courses need a 3.0 GPA or higher, be in their senior year, and have permission from the instructor and CAP to register. Students should meet with the GES department advisor before registering for courses.

To learn more about the Student Learning Outcomes for this program, please visit our website.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Environmental Sciences Minor

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

The environmental sciences minor offers students exposure to the breadth of environmental issues. Students emphasize the natural/physical sciences, and may strategically incorporate the social sciences and humanities.

These program and degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 17 credit hours from approved courses.
2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses applied to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty from approved courses.

Program Restrictions, Allowances and Recommendations

1. Many of the upper-division courses have prerequisites; the student must check the catalog for prerequisite requirements for these courses.
2. The four upper-division elective courses for the Environmental Sciences minor cannot be from the student's major discipline, even if the particular course is not counted toward the major.
3. Undergraduate students may count up to three credit hours of independent study (any combination of ENVS 4840 Independent Study: ENVS and ENVS 4880 Directed Research) towards elective credit in the minor as approved by the undergraduate coordinator.
4. The lecture/laboratory sequence can be part of the requirements for the major, but not in the student's major department (i.e., a biology major cannot use the general biology sequence, but could use the general chemistry sequence, which is also required for the biology major).

Code	Title	Hours
Complete two of the following lecture/laboratory combinations: [1]		*8*
Students can mix and match honors or majors specific lectures and labs as long as they are in the same sequence.		
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	
BIOL 2030 & BIOL 2031	Honors Organisms to Ecosystems (Gen Bio) and Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2040 & BIOL 2041	Honors Molecules to Cells (Gen Bio) and Honors Molecules to Cells Lab (Gen Bio)	
CHEM 2031 & CHEM 2038	General Chemistry I and General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	

CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 2081 & CHEM 2038	Honors General Chemistry I and General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2091 & CHEM 2068	Honors General Chemistry II Lecture and General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
ENVS 1044 & ENVS 1045	Introduction to Environmental Sciences and Introduction to Environmental Sciences Laboratory	
GEOL 1073 & GEOL 1074	Physical Geology: Surface Processes and Physical Geology: Surface Processes Laboratory	
GEOL 1083 & GEOL 1084	Physical Geology: Internal Processes and Physical Geology: Internal Processes Laboratory	
PHYS 2010 & PHYS 2321	College Physics I and Intro Experimental Phys Lab I	
PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II	
Take a minimum of nine additional elective credits from the following courses, outside of the student's major discipline [2]		*9*
BIOL 3411	Principles of Ecology	
CHEM 4700	Environmental Chemistry	
ECON 4540	Environmental Economics	
ENVS/GEOG 4720	Climate Change: Causes, Impacts and Solutions	
GEOG/ENVS 3232	Weather and Climate	
GEOG 3240	Colorado Climates	
GEOG 4020	Earth Environments and Human Impacts	
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4090	Environmental Modeling with Geographic Information Systems	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG/GEOL 4240	Applied Geomorphology	
GEOG 4265	Sustainability in Resources Management	
GEOG/GEOL 4270	Glacial Geomorphology	
GEOG 4280	Environmental Hydrology	
GEOG 4335	Contemporary Environmental Issues	
GEOG 4350	Environment and Society in the American Past	
GEOG 4420	The Politics of Nature	
GEOG 4440	Science, Policy and the Environment	
GEOG 4731	Mountain Biogeography	
GEOG/ENVS 4740	Soil Science and Geography	
PSCI 4354	Environmental Politics	
Total Hours		**17**

1 The lecture/laboratory sequence can be part of the requirements for the major, but not in the student's major department (i.e., a biology major cannot use the general biology sequence, but could use the general chemistry sequence, which is also required for the biology major).

2 The four upper-division elective courses for the Environmental Sciences minor cannot be from the student's major discipline, even if the particular course is not counted toward the major.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/minors/minor-environmental-sciences/).

Geography Minor

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus or online program.

Declaring This Minor

- Please see your advisor.
- Please click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 GEOG credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) GEOG credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine GEOG credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The minor is flexible and does not have core requirements. A student can elect to take any GEOG courses as long as they are not being used to fulfill requirements in another degree program in the department.
2. Undergraduate students may count up to three credit hours of independent study (GEOG 3840 Independent Study: GEOG, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research/GEOL 3840 Independent Study: GEOL, GEOG 4840 Independent Study: GEOG, GEOG 4880 Directed Research) towards elective credit in the minor as approved by the undergraduate advisor.
3. Students may not double-count courses for the Geography minor and another degree program in the department, the Sustainability Minor, or the GISci Certificate.

Code	Title	Hours
Take any 15 credit hours of GEOG courses as long as they are not being used to fulfill requirements in another degree program in the department.		*15*
A minimum of nine credit hours must be 3000 or 4000 level.		

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/minors/minor-geography/).

Urban Studies and Planning Minor

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences Department information.

The urban studies and planning minor in the Department of Geography and Environmental Sciences provide non-geography undergraduate students the opportunity to pursue studies in the professional field of planning. Geography majors can pursue the urban studies option, so this minor would not be available to these majors.

Geography and urban and regional planning share a common concern for the spatial configuration of the places we inhabit and enjoy. In recognition of this close association, there is currently an articulation agreement between the Department of Geography and Environmental Sciences and the College of Architecture and Planning that provides students with a mechanism for acceleration through the Master of Urban and Regional Planning (MURP) degree program, if accepted into that graduate program. Those students completing the requirements for an undergraduate planning minor may also be eligible to pursue an accelerated MURP degree. If interested in this option, the student should work closely with the minor advisor in selecting coursework. (Please see the Graduate Catalog for more information on this graduate program.)

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor, and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Please click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours from approved courses.
2. Students must complete a minimum of 12 upper-division (3000- level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of nine credit hours of approved coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Although the three core courses may be taken in any order, it is advisable to begin with GEOG 1602 Urban Studies and Planning, since this course familiarize students with many key concepts used in other classes.
2. All undergraduate students, except geography majors, are eligible for this minor.
3. Students interested in applying for the articulated MURP degree program must achieve a grade of B (3.0) or higher in required courses.

Code	Title	Hours
Complete the following required courses:		*9*
GEOG 1602	Urban Studies and Planning	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
Complete two of the following elective courses:		*6*
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4235	GIS Applications in the Health Sciences	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4710	Disasters, Climate Change, and Health	
URPL 5000	Planning History and Theory	
URPL 5010	Planning Methods	
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/minors/minor-urban-studies-and-regional-planning/).

Geographic Information Science Undergraduate Certificate

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

GISci Certificate Advisors: Peter Anthamatten and Rafael Moreno-Sanchez
E-mail: Peter.Anthamatten@ucdenver.edu and Rafael.Moreno@ucdenver.edu

The Geographic Information Science (GISci) Certificate in the Department of Geography and Environmental Sciences is designed to provide CU Denver undergraduates and graduates, as well as non-degree seeking students interested in professional development, with proficiency in the application of spatial thinking, geographic information science, and geo-technologies in the social and physical sciences, spanning the natural, built and human environments and emphasizing human-environment interconnections. The GISci Certificate core establishes a broad foundation in spatial technologies and methodologies, including geographic information systems, remote sensing, cartography, spatial extensions to database management systems, and statistics. From this base, students can delve into various specialization areas depending on their interests.

Upon successful completion of the certificate, students will be able to:

- articulate and apply basic theoretical underpinnings of spatial analytical principles, methodologies, and techniques;
- effectively utilize at least three different types of software used for spatial analysis;
- apply geospatial thinking, geographic information science, and geo-technologies appropriately; and
- analyze diverse real-world problems that have a spatial dimension and develop alternative solutions to them.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- CU Denver undergraduate students in any discipline or major may be admitted to the program.
- Of the four core requirements, only the statistics class has prerequisites, including algebra and introductory calculus. Because of the technical nature of the GIS and remote sensing course work, however, some mathematical experience is desirable prior to beginning the program.
- Students may begin the program in any semester or during the summer by making arrangements with the GISci certificate coordinator, and completing and signing the Application for GISci Certificate. This application is required to be formally registered in the GISci Certificate program, and must be completed no later than the semester prior to the scheduled completion of the certificate.

Procedure to request the issuing of GIS Certificate

When you have completed all the courses required for the Graduate or Undergraduate GISc Certificate with a grade of B- or above, send the following information to the GIS coordinators (Rafael Moreno **(**rafael.moreno@ucdenver.edu**) and** Peter Anthamatten **(**peter.anthamatten@ucdenver.edu**)).** Students must complete the certificate and submit a notification of completion to the GIS coordinator(s) before graduation.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Geographic Information Science undergraduate certificate advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 18 credit hours from the approved courses.
2. Students must complete a minimum of 12 upper division (3000-level and above) credit hours from the approved courses.
3. Students must earn a minimum grade of B- (2.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours with CU Denver faculty. Students who completed a statistics course at another institution may apply that transferred course with certificate advisor approval, and must complete all remaining courses with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The certificate will be awarded when the student graduates with the bachelor's degree.
2. Although the five core courses may be taken in any order, it is advisable to begin with GEOG 2080 Introduction to Mapping and Map Analysis followed by GEOG 4080 Introduction to GIS, since these courses familiarize students with many key concepts used in the other classes.
3. All core courses are offered on a yearly basis. Any alterations to the program **must** be approved by the GISci certificate advisor. Any changes to the standard curriculum program must be approved in writing by the GISci Certificate advisor and filed with the GISci Certificate Application Form.
4. Because a certificate is a CU Denver certification of a students' specialized knowledge in an advanced subject matter, all courses in a certificate program are expected to be taken in residency at CU Denver. Only in rare circumstances will exceptions be made regarding

this policy. Courses taken within the GISci Certificate Program may be used towards one other degree requirement.

5. Please pay attention to prerequisites for specific courses.

Code	Title	Hours
Complete the following required courses:		*12*
GEOG 2080	Introduction to Mapping and Map Analysis	
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4080	Introduction to GIS	
GEOG 4081	Cartography	
Complete one of the following statistics courses, or one approved by GIS Certificate advisor. [2]		*3*
ANTH 4050	Quantitative Methods in Anthropology	
BANA 2010	Business Statistics	
CVEN 3611	Engineering Statistics	
ECON 3811	Statistics with Computer Applications	
MATH 2830	Introductory Statistics	
PSYC 2090	Statistics and Research Methods	
SOCY 3119	Qualitative Methods	
Complete one of the following elective courses:		*3*
GEOG 4070	Remote Sensing II: Advanced Remote Sensing	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4090	Environmental Modeling with Geographic Information Systems	
GEOG 4091	Open Source Software for Geospatial Applications	
GEOG 4092	GIS Programming and Automation	
GEOG 4095	Deploying GIS Functionality on the Web	
GEOG 4235	GIS Applications in the Health Sciences	
CVEN 5382	Geospatial Data Development	
CVEN 5385	GIS Relational Database Systems (or an elective approved by the GISci Certificate Coordinator)	
Or an elective course approved by GIS Certificate Coordinator. [1]		
Total Hours		**18**

[1] Although only one elective is required to complete the Undergraduate GISci Certificate, it is strongly recommended that additional elective courses are taken to broaden the experience and knowledge of the student in GIS analysis and applications. A three-credit hour internship with a geospatial faculty sponsor is highly recommended.

[2] Approved statistics courses may have prerequisites, and some are 4 credit hours.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/certificates/gis-certificate/#learning_outcomes-280).

Free and Open Source Software for Geospatial Applications Undergraduate Certificate

Introduction

Please click here to see Geography and Environmental Sciences department information.

Certificate Advisor: Rafael Moreno
E-mail: rafael.moreno@ucdenver.edu

Students receiving the certificate will be able to design and develop FOSS4G exclusive or hybrid (using FOSS4G and proprietary software) geospatial information infrastructures and applications capable of better addressing specific socioeconomic, technological, institutional, and financial contexts where GISc&T is used to support planning and decision making.

Certificate Objectives

1. Provide students and working geospatial professionals with the knowledge and skills for the effective use and development of FOSS4G solutions in diverse application contexts. This complements and enhances the knowledge and skills they have in the use of geospatial proprietary software solutions.
2. Students will be exposed to several FOSS4G alternatives to address the needs of a geospatial information infrastructure from desktop, database management systems, systems automation/customization, all the way to Web/Cloud-based applications and enterprise level solutions.
3. Students will acquire the necessary knowledge and skills to effectively use the most advanced FOSS4G alternatives to develop solutions for each of levels of a geospatial information infrastructure previously mentioned.
4. Students will have the knowledge and hands-on skills that will enable them to design and develop hybrid geospatial information infrastructures that make use of proprietary software and FOSS4G incorporating each them in a combination that maximizes efficiency of the end infrastructure.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- CU Denver undergraduate students in any discipline or major may be admitted to the program.
- A student may begin the program in any semester or during the summer by making arrangements with the FOSS4G Certificate Advisor. This should be done as soon as you have decided to pursue the certificate, and no later than the semester previous to completion of all the courses required to obtain the certificate.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Free and Open Source Software for Geospatial Application advisor to confirm the best plans of study before finalizing them.

General Requirements

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours.
2. Students must complete a minimum of 12 upper division (3000 or above) credit hours.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the program GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The students will have the option to take other courses above and beyond the core requirements for the certificate.

Code	Title	Hours
Complete the following courses:		*12*
CVEN 5385	GIS Relational Database Systems	
Students learn the principles and techniques to design a spatial database and perform multiple analyses and functions in a FOSS4G spatial database management system.		
GEOG 4086	FOSS4G Systems Integration	
This course functions as the capstone for the certificate. It concentrates on applying all the knowledge and skills previously obtained and adding more in the area of integration of geospatial information infrastructures based on FOSS4G. Students work on integrating systems from desktop to Web/Cloud-based applications.		
GEOG 4091	Open Source Software for Geospatial Applications	
This course exposes students to the diversity of FOSS4G solutions that exist for each of the elements of geospatial information infrastructure. They acquire the necessary hands-on skills to effectively use one FOSS4G to address the needs of each of the levels of a geospatial information infrastructure.		
GEOG 4092	GIS Programming and Automation	
Students learn programming principles and techniques to automate processes and customize a geographic information system (GIS), and to integrate and coordinate the functions of diverse geospatial software (e.g. a database management system with a GIS).		
Total Hours		**12**

Optional Courses

Students can choose to complete the following course that can complement their formation in specific topics. However, this course is not required as part of the certificate program.

Code	Title	Hours
BIOL 3763	Biostatistics	
This course uses the open source software R for environmental data analysis including spatial statistics and geostatistics.		
GEOG 5050	Applied Spatial Statistics	

This course is offered annually as part of the GES offerings. It also uses R for data analysis including spatial statistics and geostatistics.	
GEOG 4095	Deploying GIS Functionality on the Web
This course uses FOSS4G for database analysis and creation of Web-based GIS systems.	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/certificates/sustainable-urban-agriculture-certificate/).

Sustainable Urban Agriculture Undergraduate Certificate

Introduction

Please click here (p. 505) to see Geography and Environmental Sciences department information.

Certificate Advisor: Amanda Weaver
Email: amanda.weaver@ucdenver.edu

The goal of the certificate program is to provide GES students advanced training in sustainable urban agriculture through the integration of university classroom study and field-based practicum conducted at the department's field research station. Requirements for the certificate are therefore divided between on-campus courses and field courses.

Upon successful completion of the certificate, students will:

- Have knowledge of the history of urban farming
- Understand the modern agro-food system
- Participate in sustainable urban agricultural practices

Program Delivery

- This is both an on-campus and field-based program.

Declaring This Certificate

- Please contact the certificate faculty advisor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Sustainable Urban Agriculture advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 credit hours taken from approved courses.
2. Students must complete all 12 credit hours at the upper division level (3000-level and above).
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all 12 credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The certificate will be awarded when the student graduates with the bachelor's degree.
2. All core courses are offered on a yearly basis. Any alterations to the program **must** be approved by the certificate advisor.
3. Courses taken within the Sustainable Urban Agriculture Certificate Program may be used towards one other degree requirement.
4. Any changes to the standard curriculum program must be approved in writing by the certificate advisor.
5. Because a certificate is a CU Denver certification of a students' specialized knowledge in an advanced subject matter, all courses in a certificate program are expected to be taken in residency at CU Denver. Only in rare circumstances will exceptions be made regarding this policy
6. Please pay close attention to prerequisites for specific courses.

Code	Title	Hours
Complete the following required courses:		*6*
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
Complete two of the following elective courses:		*6*
GEOG 3939	Internship [1]	
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4265	Sustainability in Resources Management	
GEOG 4335	Contemporary Environmental Issues	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
GEOG 4470	Sustainable Urban Agriculture Field Study II	
Total Hours		**12**

[1] A sustainable agriculture internship with a local food/urban agriculture community organization.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/ges/programs/certificates/sustainable-urban-agriculture-certificate/).

Health and Behavioral Sciences

Chair: David Tracer
Undergraduate Program Director: Hyeyoung Nelson
Program Assistant: Maria Rase
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Overview

Public health is working to protect the environment, identifying sources of illness in population groups, controlling disease outbreaks, evaluating the economic impacts of changing demographics, developing interventions to promote healthy behavior, and producing health policy legislation. Public health draws from a broad array of disciplines, such as the social and behavioral sciences, medicine, nursing, pharmacy, physical therapy, business, economics, statistics, epidemiology, law and biology, and each provides unique insights for the diverse set of activities involved in public health practice.

Undergraduate Information

In response to the tremendous career and research opportunities in public health, the Department of Health and Behavioral Sciences in the College of Liberal Arts and Sciences (CLAS), in collaboration with the Colorado School of Public Health (CSPH), created an undergraduate major in public health. Most core classes for the public health major are team taught with one faculty member from the downtown campus (CLAS) and the other from the Anschutz campus (CSPH).

The mission of the Undergraduate Program in Public Health (BA/BS) is to prepare students with concepts, theories, and skills from social science, natural science, and public health disciplines to advance population health. We embrace a multidisciplinary approach, equip students with the capacity to respond to current and emerging issues in public health, and promote health equity, inclusivity, diversity, and social justice.

This degree is designed to accommodate as many student interests as possible. At CU Denver, we are committed to helping students develop their own individualized educational path; we strive to serve the needs of both the student who wishes to specialize in communication strategies for effective public health education campaigns, as well as the student who wants to hasten the translation of the latest bench science technologies into public health practice. To this end, the major consists of both BA and BS tracks.

Two options are available for the undergraduate major in public health: Bachelor of Arts (BA) or Bachelor of Science (BS). After completion of the program, students will have a broad background to serve as the foundation for a variety of career paths, such as immediate entry into public health positions, background training for a professional school (including but not limited to medical, dental, nursing, pharmacy or law school), or the pursuit of an advanced degree such as a master's or Ph.D. in a range of social, behavioral or natural sciences.

Honors

Public Health majors can receive Latin honors if they register for a honors section of PBHL 4099 (Capstone Experience in Public Health), successfully complete the honors requirements of the course, and maintain a 3.5 overall CU GPA and 3.7 or higher PBHL major GPA at the time of graduation. Honors distinctions are awarded as follows for the degree, based on CU and major GPAs at the time of graduation:

- Cum Laude: PBHL GPA 3.70-3.79
- Magna Cum Laude: PBHL GPA 3.80-3.89
- Summa Cum Laude: PBHL GPA 3.90-4.0

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/health-behavioral-sciences/) catalog to read about our graduate programs.

Programs

- Public Health, BA (p. 543)
- Public Health, BS (p. 546)
- Public Health, 5 year BA or BS/ Master in Public Health, MPH (p. 549)
- Public Health Demography Minor (p. 551)
- Public Health Minor (p. 553)

Faculty

Professors:

jimi adams, PhD, Ohio State University
Karen Spencer, PhD, Indiana University
David P. Tracer, PhD, University of Michigan
Sara Yeatman, PhD, University of Texas Austin

Associate Professors:

Jennifer Boylan, PhD, University of Wisconsin-Madison
Patrick Krueger, PhD, University of Colorado
Ronica Rooks, PhD, University of Maryland College Park

Assistant Professors:

Emma Bunkley, PhD, University of Arizona
Hyeyoung Nelson, PhD, University of California Los Angeles

Research and Clinical Faculty:

Jorge Ivan Ramirez, PhD, Michigan State University

Professors Emerita:

Debbi Main, PhD, University of Colorado
Jean Scandlyn, PhD, Columbia University

Public Health (PBHL)

PBHL 1001 - Race, Gender, Class, & Health (3 Credits)
Course focuses on the principles, tools, and population approach of social epidemiology as it relates health to race, gender, and class. Contemporary topics in public health will be used as case studies to illuminate principles and tools both in lecture and in recitation sections. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

PBHL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

PBHL 2001 - Introduction to Public Health (4 Credits)
An overview of the discipline and practice of public health. Includes the history of the field, its population perspective, emphasis on prevention, tools and techniques. General principles of the field are illustrated through contemporary public health case studies. Term offered: fall, spring. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

PBHL 2052 - Global Demography and Health (3 Credits)
This course examines current issues in population growth, fertility, mortality and migration throughout the globe; introduces basic demographic tools; encourages critical thinking about the causes and consequences of population change. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

PBHL 2990 - Topics in Public Health (3 Credits)
An in-depth study of selected social science perspectives/theories and their applications to population health. Topics will vary from semester to semester, with a particular emphasis on current, salient population health problems. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PBHL 3001 - Introduction to Epidemiology (4 Credits)
Introduces the basic concepts of public health and epidemiology, including assessment of disease in the community, the study of causation and association of disease with lifestyle and environmental risk factors, as well as related special topics. We recommend coursework in college algebra or higher as preparation for this class. We have found that students who take this class before completing their math requirements are at a distinct disadvantage in this course, which is math-intensive. Therefore a grade of C or higher in MATH 1110 or equivalent is strongly recommended. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PBHL 3002 - Ethnicity, Health and Social Justice (3 Credits)
Surveys core issues contributing to racial or ethnic minority differences in health status. Historical and contemporary U.S. health and social policy, including the areas of environmental health, sexual and reproductive health, children and immigrants, are examined. Cross-listed with ETST 3002. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PBHL 3010 - Human Sexuality and Public Health (3 Credits)
The focus of this course is on human sexuality using a public health lens, examining a number of sexual health issues and their relationship to individual, familial, organizational, and social-level influences. Additionally, we will focus on identifying both primary prevention and intervention approaches to reducing sexual risk factors and increasing healthy behaviors. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3020 - Introduction to Environmental Health (3 Credits)
This introductory survey course focuses on the human health implications of environmental exposures. Topics include pathways of exposure, toxicology, risk assessment, regulations, and policy development. Additionally, environmental equity, ethics, globalization, international perspectives, climate change, sustainability, and activism are considered. Prereq: PBHL 2000 or 2001 with a C- or higher. Note: Students will not earn credit for this course if they have already earned credit for PBHL 2020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3021 - Fundamentals of Health Promotion (3 Credits)
Provides an overview of the field of health promotion, including an introduction to key theories and methods, as well as exposure to the breadth of programs and diversity of settings through several case studies. Includes attention to health behaviors as contributors to current public health problems and community-based approaches to health promotion in addressing them. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3030 - Health Policy (3 Credits)
Health policies may have a profound effect on quality of life. Accessibility, cost, quality of health care; safety of food, water, and environment; the right to make decisions about our health; these issues are vitally tied to health policies. This course provides a framework for understanding the social, political and economic dimensions of health policy. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3031 - Health, Human Biology and Behavior (3 Credits)
Introduces the multi-factorial nature of human health and well-being. Considers the influences of biology (genetics), behavior, environment, culture and social determinants, and health policy on the nature of disease and health problems from an integrated perspective. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PBHL 3041 - Health, Culture and Society (3 Credits)
Examines health and illness for individuals, families, and societies from multiple international perspectives, focused on topics such as traditional vs. Western medicine, characteristics of healers and therapeutic relationships, and stigmatized segments of society and their health status. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Cross-listed with ECON 3050 and PSYC 3050. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3051 - Mental Illness and Society (3 Credits)
This course takes a social and public health--as opposed to medical, biological or psychiatric--approach to understanding mental disorder and society. Course addresses historical definitions of mental illness, social patterns of mental disorder and treatment and experience of mental illness patients, focusing on the U.S. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3060 - AAPI Communities and Health (3 Credits)
Surveys core issues shaping health experiences and health status of Asian American and Pacific Islander communities in the United States. Historical and contemporary U.S. health and social policies that have directly impacted AAPI health and well-being in the United States are examined. Students will also engage with community leaders and partners committed to AAPI communities. Cross-listed with ETST 3060. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3070 - Perspectives in Global Health (3 Credits)
This course examines public health approaches to analyzing health issues and identifying evidence-based and culturally appropriate interventions to reduce health inequities and improve global health. Focuses on challenges to global health such as under-resourced health systems, lack of effective global governance, aging populations, rising chronic diseases, and climate change. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3071 - Global Topics In Sexual and Reproductive Health (3 Credits)
Surveys trends and determinants of sexual and reproductive health around the globe and in the United States. Examines the social and behavioral determinants of sexual and reproductive health and the influence of policy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3081 - Health in the City: Urban Health (3 Credits)
This course introduces students to urban health and the various factors of the physical, social and health environments that affect well-being and vulnerability of communities and neighborhoods in cities. Note: This course will include a weekly collaborative assignment, a high-impact educational practice, that foster student engagement with active and problembased learning. Although not required, it would be helpful for students to have completed a 2000-level course from the undergraduate program in Public Health. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3091 - Live Long and Prosper: Public Health & Aging (3 Credits)
This course provides a broad overview of the interdisciplinary field of public health aging, ranging from individual attitudes and beliefs about aging to policies that aim to maximize health and well-being among older adults. A key focus is on the diversity that exists among older adults and the promotion of healthy aging for all by examining changes to social, behavioral, and biological functioning with age. Note: Although not required, it would be helpful for students to have taken a 2000-level course in public health. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3200 - Human Migration: Nomads, Sojourners, and Settlers (3 Credits)
Explores the relationship between human migration, voluntary and forced, and social organization and culture in the modern world. Case studies include pastoralists, foragers, refugees, immigrants, sojourners, and settlers and their impact on health, culture, identity, ethnicity, tradition and nationality. Cross-listed with ANTH 3200. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3440 - Medical Sociology (3 Credits)
This course covers key issues in population health and emphasizes how sociological perspectives both challenge and augment biomedical perspectives on health and health care. We also discuss the social causes and consequences of race/ethnic, sex, and socioeconomic disparities in health. Cross-listed with SOCY 3440. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.00 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.00 cumulative GPA
Typically Offered: Fall, Spring, Summer.

PBHL 3999 - Special Topics in Public Health (1-4 Credits)
Explores topics in public health. Topics will vary from semester to semester, with a particular emphasis on current topics. Prereq: Junior or senior standing or permission of instructor. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: junior standing or higher

PBHL 4020 - Global Health: Comparative Public Health Systems (3 Credits)
Within a limited period of time, middle and low income countries have experienced dramatic changes that affect the length and quality of peoples' lives. The health indicators for each country reflect a rich and meaningful context within interacting systems of economic, social, cultural patterns, and environmental and social justice. Analysis and contrast of public health indicators such as the millennium development goals develop an understanding of the complexity against a background of change. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with URPL 6349. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4021 - Community Health Assessment (3 Credits)
Introduces applied methods of public health, including: analyzing community-level assessment data, developing a casual model for selected health outcomes, maximizing community participation in the assessment process, developing assessments as a team, and setting the stage for effective intervention and evaluation. Prereq: Upper division standing, a course in statistics, and an introductory course in epidemiology (HBSC 4001, 5001). Cross-listed with HBSC 5021. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4031 - Ethnographic Research In Public Health (3 Credits)
Qualitative, ethnographic tools for practical applications in public health, including methods of direct observation, informant interviews, focus groups, structured ethnographic methods, rapid assessment and participatory action research. Basic analytic strategies, including review of computer software, coding and data display techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4040 - Social Determinants of Health (3 Credits)
This course explores social inequalities in physical and mental health, the illness experience, the healing professions, health policy, relations between providers and patients, and the structure, access to, and financing of health care organizations, with some cross-national discussions. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 4070 - Health Disparities (3 Credits)
The purpose of this seminar is to provide students with an understanding of how historical, psychosocial, environmental, and to some degree, biological and genetic factors contribute to inequality in health and health care. Prereq: PBHL 4040, PBHL 3001, PBHL 2051 with a grade of C- or better. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PBHL 2051, 3001, and 4040 with a grade of C- or better

PBHL 4080 - Global Health Practice (3 Credits)
A travel-study course that provides students the opportunity to work on global health issues in the context of a supervised internship experience. In addition to a formal internship placement or directed research opportunity, students attend formal lectures and participate in seminars devoted to addressing those health issues most relevant to the country in which the course is being taught. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with ANTH 4080/5080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4090 - Psychedelic Anthropology (3 Credits)
Psychotropic drugs, both legal and illicit, are a predominant part of our everyday lives. This course examines their use and meaning within cultures of health and wellness, and the plant medicine, spiritual, social, political and economic issues that surround their production, use and misuse. Course activities focus on ethnographic research strategies and arts-based approaches to public scholarship. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with ANTH 4090/5090. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4099 - Capstone Experience in Public Health (3 Credits)
Offers students the opportunity to integrate, synthesize and apply concepts learned throughout the core curriculum of the public health major to real-world issues. The course involves extensive writing and small group presentations on the epidemiological, global, social, environmental, and policy dimensions of current problems in public health. Prereq or Coreq: PBHL 2000 or 2001 and all or all but one of PBHL 2020 or 3020, PBHL 3001, PBHL 3030, PBHL 3070, PBHL 4040 with a C- or better. Students must enroll in that remaining course concurrently with PBHL 4099. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq/Co-req: PBHL 2000 or 2001 and all or all but one of PBHL 2020 or 3020, PBHL 3001, PBHL 3030, PBHL 3070, PBHL 4040 with a C- or better, and take that remaining course concurrently with PBHL 4099.
Typically Offered: Fall, Spring.

PBHL 4110 - Public Health Perspectives On Family Violence (3 Credits)
Public health views family violence from a prevention perspective. Our exploration of child abuse, intimate partner violence, and other forms of family violence will complement other disciplinary approaches by focusing heavily on the community and social factors that contribute to abusive relationships. Theories of power and coercion and approaches to researching these issues will be analyzed and discussed through our exploration of the various forms of family violence. Prereq: Junior or Senior standing or permission from instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4200 - The Global HIV/AIDS Epidemic (3 Credits)
Provides a foundation for a critical analysis of HIV/AIDS in global context, concerning topics such as disease, the body, ethnicity/race, gender, sexuality, risk, addiction, power, and culture together with a set of ethnographic texts that explore the epidemic's impact. Cross-listed with HBSC 4200. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PBHL 4620 - Health Risk Communication (3 Credits)
We are bombarded all day with communication expressing a sense of risk, of danger, of threats to our individual and communal well-being. This class acquaints students with contemporary theory, research, and practice in health risk communication across a variety of threats both real and imagined. Cross-listed with COMM 5620, COMM 4620, and ENVS 5620. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4840 - Independent Study (1-4 Credits)
This course requires active independent learning based upon a written curricular outline and agreement with faculty in Public Health who supervise the student's work throughout the semester. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring, Summer.

PBHL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PBHL 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Prereq: Upper division undergraduate standing and permission of instructor.
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PBHL 4999 - Topics in Public Health (4 Credits)
An in-depth study of selected social science perspectives/theories and their applications to population health. Topics will vary from semester to semester, with a particular emphasis on current, salient population health problems. Prereq: Junior or senior standing or permission of instructor. Cross-listed with HBSC 5999. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: junior standing or higher

Public Health, BA

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Introduction

Please click here (p. 538) to see Health and Behavioral Sciences department information.

The College of Liberal Arts and Sciences (CLAS) and the Colorado School of Public Health (CSPH) together created the undergraduate Public Health program. Public health professionals work to protect the environment, identify sources of illness in population groups, control disease outbreaks, evaluate the economic ramifications of changing demographics, develop interventions to promote healthy behavior and produce health policy legislation. Public health draws from a broad array of disciplines, including a range of social, behavioral, and natural sciences, each provides unique insights for the diverse set of activities involved in public health practice.

Students in the BA program develop a specialty in the social sciences and public health. Graduates with a BA in Public Health will be prepared for pursuit of graduate degrees in a broad range of fields, including the social and behavioral sciences, public health, law, social work, business administration, and health services research. The program is especially appropriate for students intending to pursue careers in public health, as well as health policy and administration.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 43 credit hours from approved courses.
2. Students must complete a minimum of 16 upper-division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 26 PBHL credit hours with CU Denver faculty, including a minimum of 5 of the following PBHL 2001 Introduction to Public Health, PBHL 3001 Introduction to Epidemiology, PBHL 3020 Introduction to Environmental Health,PBHL 3030 Health Policy, PBHL 3070 Perspectives in Global Health, PBHL 4040 Social Determinants of Health or PBHL 4099 Capstone Experience in Public Health.

Code	Title	Hours
Complete the following program requirements:		**43**
Complete all of the following required courses:		*23*
A minimum of five must be taken at the University of Colorado Denver.		
PBHL 2001	Introduction to Public Health	
PBHL 3001	Introduction to Epidemiology	
PBHL 3020	Introduction to Environmental Health	

PBHL 3030	Health Policy	
PBHL 3070	Perspectives in Global Health	
PBHL 4040	Social Determinants of Health	
PBHL 4099	Capstone Experience in Public Health	
Complete one of the following Quantitative Methods courses, or another statistics course that has been approved by the undergraduate program director/advisor in advance:		*3*
ANTH 4050	Quantitative Methods in Anthropology	
BIOL 3763	Biostatistics	
MATH 2830	Introductory Statistics	
MATH 4830	Applied Statistics	
PSYC 2090	Statistics and Research Methods	
Complete six credits (2 courses) of PBHL electives.		*6*
Complete one of the following Biological Sciences Options:		*8*
Biological Sciences Option 1 (p. 544)		
Biological Sciences Option 2 (p. 545)		
Complete three additional PBHL elective credits, or choose one of the following pre-approved electives from another department, or another course that has been approved by the undergraduate program director/advisor in advance:		*3*
ANTH 4010	Medical Anthropology: Global Health	
ANTH 4080	Global Health Practice	
ANTH/PBHL 4090	Psychedelic Anthropology	
ANTH 4290	Anthropology and Public Health	
ANTH 4600	Medical Anthropology	
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4575	Designing Health Messages	
COMM 4620	Health Risk Communication	
ECON 4660	Health Economics.	
ENVS 1342	Environment, Society and Sustainability	
ETST 3002	Ethnicity, Health and Social Justice	
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4235	GIS Applications in the Health Sciences	
HEHM 3100	Introduction to Health Humanities	
HEHM 3570	Death & Dying: Social & Medical Perspectives	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4330	U.S. Health Policy	
PSYC 3262	Health Psychology	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3305	Abnormal Psychology	
PSYC 3822	Aging, Brain and Behavior	
SOCY 3440	Medical Sociology	
SOCY 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4110	Sociology of Health Care	
SOCY 4220	Population Change and Analysis	
SOCY 4290	Aging, Society and Social Policy	

Biological Sciences Option 1

Code	Title	Hours
Complete two of the following courses:		*8*
BIOL 1550	Basic Biology: Ecology and the Diversity of Life	

BIOL 1560	Basic Biology: From Cells to Organisms
ANTH 1303	Introduction to Biological Anthropology

Biological Sciences Option 2

Code	Title	Hours
Complete the following courses:		*8*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/hbsc/degree-programs/bachelor-arts-or-science-public-health/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/#CLAS).

Public Health, BS

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Introduction

Please click here (p. 538) to see Health and Behavioral Sciences department information.

The College of Liberal Arts and Sciences (CLAS) and the Colorado School of Public Health (CSPH) together created the undergraduate Public Health program. Public health professionals work to protect the environment, identify sources of illness in population groups, control disease outbreaks, evaluate the economic ramifications of changing demographics, develop interventions to promote healthy behavior and produce health policy legislation. Public health draws from a broad array of disciplines, including a range of social, behavioral, and natural sciences, each provides unique insights for the diverse set of activities involved in public health practice.

Students in the BS program develop a specialty in the natural sciences and public health. Graduates with a BS in Public Health will be prepared for pursuit of graduate degrees in a broad range of fields, including the natural, social, and behavioral sciences, public health, law, medicine, dentistry, pharmacy, nursing, business administration, and health services research. The program is especially appropriate for students intending to pursue careers in public health, as well as primary care specialties in medicine, nursing, or health policy and administration.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Degree Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences General Degree Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 73 credit hours from approved courses.
2. Students must complete a minimum of 16 upper-division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 26 PBHL credit hours with CU Denver faculty, including a minimum of 5 of the following PBHL 2001 Introduction to Public Health , PBHL 3001 Introduction to Epidemiology , PBHL 3020 Introduction to Environmental Health , PBHL 3030 Health Policy, PBHL 3070 Perspectives in Global Health, PBHL 4040 Social Determinants of Health or PBHL 4099 Capstone Experience in Public Health.

Program Restrictions, Allowances and Recommendations

1. PHYS 2321 Intro Experimental Phys Lab I and PHYS 2341 Intro Experimental Phys Lab II are specifically designed for students in non-Physics majors and can be paired with either PHYS 2010 College Physics I and PHYS 2020 College Physics II or PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based lectures. Students pursuing a second major in Physics should complete PHYS 2311 General Physics I: Calculus-Based and PHYS 2331 General Physics II: Calculus-Based and PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II.

Code	Title	Hours
Complete the following program requirements:		**73**
Complete all of the following required courses:		*23*
A minimum of five must be taken at the University of Colorado Denver.		
PBHL 2001	Introduction to Public Health	
PBHL 3001	Introduction to Epidemiology	
PBHL 3020	Introduction to Environmental Health	
PBHL 3030	Health Policy	
PBHL 3070	Perspectives in Global Health	
PBHL 4040	Social Determinants of Health	
PBHL 4099	Capstone Experience in Public Health	
Complete one of the following Quantitative Methods courses, or another statistics course that has been approved by the undergraduate program director/advisor in advance:		*3*
ANTH 4050	Quantitative Methods in Anthropology	
BIOL 3763	Biostatistics	
MATH 2830	Introductory Statistics	
MATH 4830	Applied Statistics	
PSYC 2090	Statistics and Research Methods	
Complete the following Biological and Physical Sciences requirements:		*41*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3411	Organic Chemistry I	
or CHEM 3481	Majors Organic Chemistry I	
CHEM 3418	Organic Chemistry Lab I	
or CHEM 3488	Majors Organic Chemistry Laboratory I	
CHEM 3421	Organic Chemistry II	
or CHEM 3491	Majors Organic Chemistry II	
CHEM 3428	Organic Chemistry Lab II	
or CHEM 3498	Majors Organic Chemistry Laboratory II	
MATH 1401	Calculus I	
PHYS 2010	College Physics I	
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2020	College Physics II	
or PHYS 2331	General Physics II: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
PHYS 2341	Intro Experimental Phys Lab II	
Complete three credits (1 course) of PBHL electives.		*3*

Complete three additional PBHL elective credits, or choose one of the following pre-approved electives from another department, or another course that has been approved by the undergraduate program director/advisor in advance:		*3*
ANTH 4010	Medical Anthropology: Global Health	
ANTH 4080	Global Health Practice	
ANTH/PBHL 4090	Psychedelic Anthropology	
ANTH 4290	Anthropology and Public Health	
ANTH 4600	Medical Anthropology	
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4575	Designing Health Messages	
COMM 4620	Health Risk Communication	
ECON 4660	Health Economics.	
ENVS 1342	Environment, Society and Sustainability	
ETST 3002	Ethnicity, Health and Social Justice	
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4235	GIS Applications in the Health Sciences	
HEHM 3100	Introduction to Health Humanities	
HEHM 3570	Death & Dying: Social & Medical Perspectives	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4330	U.S. Health Policy	
PSYC 3262	Health Psychology	
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PSYC 3305	Abnormal Psychology	
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SOCY 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4110	Sociology of Health Care	
SOCY 4220	Population Change and Analysis	
SOCY 4290	Aging, Society and Social Policy	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/hbsc/degree-programs/bachelor-arts-or-science-public-health/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Public Health, 5 year BA or BS/ Master in Public Health, MPH

Introduction

Please click here (p. 538) to see Health and Behavioral Sciences department information.
Please click here (p. 543) and here to see the overview of the Public Health undergraduate program.
Please click here (https://coloradosph.cuanschutz.edu/education/degrees-and-programs/master-of-public-health/) to see the overview of the Masters in Public Health graduate program.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

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Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

This 5-year degree program combines the Bachelors of Art/Bachelor of Science (BA/BS) of Public Health (PBHL) and the Master of Public Health (MPH). These degrees are offered, respectively, at the University of Colorado Denver by the Department of Health and Behavioral Sciences in the College of Liberal Arts and Sciences on the downtown campus, and the Colorado School of Public Health, a joint venture of the University of Colorado, Colorado State University and the University of Northern Colorado. Students will receive both degrees in the program simultaneously at the end of the program.

BA/BS-MPH students may choose any of the MPH concentration areas available across the three campuses. Concentration areas include the five core areas of public health (Biostatistics; Community and Behavioral Health; Environmental and Occupational Health; Epidemiology; and Health Systems, Management and Policy) as well as several other areas such as Maternal and Child Health, Health Communications, Community Health Education, and others.

- To be eligible, students must be declared PBHL majors (BA or BS).
- Ideal candidates will have a GPA of 3.5 or higher, and will have completed a minimum of 12 credit hours toward their undergraduate PBHL degree including:

Code	Title	Hours
Completed with a B+ or higher		
PBHL 2001	Introduction to Public Health	4
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	4
BIOL 2020 & BIOL 2021	Molecules to Cells (Gen Bio) and Molecules to Cells Lab (Gen Bio)	4

- Complete an application via SOPHAS EXPRESS (**Note:** GREs are not required). Students should apply by the January preferred deadline in their Sophomore or Junior year.
- Upon application, declare a provisional MPH concentration (**Note:** some concentrations may establish additional eligibility criteria).

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Undergraduate degree requirements follow either the BA (found here (p. 543)) or BS (found here (p. 546)).
2. Students in this program will be conferred both degrees (BA or BS, and MPH) simultaneously upon completion of all requirements.
3. Each class must be completed with a grade of C- or higher to count towards the major, and students must maintain a minimum 3.5 GPA in the undergraduate major and MPH courses.
4. To facilitate timely completion of the program, students are expected to take six credits in each of two summers.
5. If students apply late to this program, (including having already completed additional PBHL core requirements), they may not be able to benefit from all of the substitution-based time savings, and therefore may not be able to complete the program in 5 years.
6. The following are exceptions and/or substitutions that are applicable to the BA/BS requirements for students in the BA/BS - MPH program:

Code	Title	Hours
The following courses serve dual purpose for the PBHL-BA/BS and MPH degrees.		**9**
Complete nine credits of graduate level MPH coursework during the undergraduate career. [2]		*9*
BIOS 6601	Applied Biostatistics I (replaces MATH 4830/5830 Applied Statistics)	3
EPID 6630	Epidemiology (replaces PBHL 3001 Intro to Epidemiology)	3
EHOH 6614	Occupational and Environmental Health ((replaces PBHL 3030 Intro to Environmental Health)	3

[2] Three graduate-level Public Health courses will fulfill the undergraduate matched required courses and fulfill the requirements for MPH program.
Students need to complete PBHL 4099 Capstone Experience in Public Health prior to enrolling in the MPH program. These three graduate-level Public Health courses can apply as substitutes towards satisfying the pre-requisite for PBHL 4099.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/hbsc/degree-programs/5-year-public-health-ba-bs-mph/).

Public Health Demography Minor

Introduction

Please click here (p. 538) to see Health and Behavioral Sciences department information.

The undergraduate minor in Public Health Demography will introduce students to population-based approaches to health and wellbeing. Both demography and public health draw on theories and methods from across the social and behavioral sciences, to understand population level outcomes. Collectively, the courses in the minor will strengthen skills in analytical thinking, critical thinking, and quantitative reasoning, as related to topics including fertility, mortality, migration, maternal and child health, health disparities, and population health.

The minor in Public Health Demography will help to prepare students for graduate training in public health, demography, epidemiology, or biostatistics. Further, the minor will help to prepare students for jobs that require an understanding of population dynamics. Demographic skills are useful in fields including actuarial studies, marketing, consulting, non-profits, and various agencies in the local, state, and federal government.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 17 credits drawn from the approved course lists.
2. Students must complete a minimum of six upper-division PBHL (3000-level and above) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PBHL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Due to substantial overlap in coursework, students who complete the major in Public Health shall not also be awarded the minor in Public Health Demography.

Required Courses

Note: Students should check for prerequisites when enrolling in courses.

Code	Title	Hours
Complete the following program requirements:		
General Public Health		*8*
PBHL 2001	Introduction to Public Health	
PBHL 3001	Introduction to Epidemiology	
Core Demography		*6*
PBHL 2052	Global Demography and Health	
SOCY 4220	Population Change and Analysis	
Demographic and Statistical Elective		*3*
PBHL 3070	Perspectives in Global Health	
or PBHL 4040	Social Determinants of Health	

or MATH 2830	Introductory Statistics	
Total Hours		**17**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/hbsc/degree-programs/minors/).

Public Health Minor

Introduction

Please click here (p. 538) to see Health and Behavioral Sciences department information.

The undergraduate minor in Public Health is designed to provide students with a basic understanding of the social, cultural, and biological dimensions of health. The minor curriculum provides students with the intellectual and methodological tools needed to understand the joint bio-cultural determinants and contexts of health, health care and public health.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 24 credit hours from the approved courses.
2. Students must complete a minimum of 12 upper-division (3000-level and above) PBHL credit hours from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of 12 PBHL credit hours with CU Denver faculty from the approved courses.

Program Restrictions, Allowances and Recommendations

1. No more than six credit hours may be counted toward a major or minor in another department and counted toward the minor in Public Health.
2. Due to substantial overlap in coursework, students who complete the major in Public Health cannot also be awarded the minor in Public Health.
3. Students must complete a minimum of 12 upper-division level credit hours with CU Denver faculty.

Code	Title	Hours
Complete the following program requirements:		
Complete the following General Public Health courses:		*8*
PBHL 2001	Introduction to Public Health	
PBHL 3001	Introduction to Epidemiology	
Complete a minimum of two of the following Public Health Focused courses: [1]		*6*
PBHL 3020	Introduction to Environmental Health	
PBHL 3030	Health Policy	
PBHL 3070	Perspectives in Global Health	
PBHL 4040	Social Determinants of Health	
Complete one of the following Biological Background lab courses:		*4*
ANTH 1303	Introduction to Biological Anthropology	
BIOL 1550	Basic Biology: Ecology and the Diversity of Life	
BIOL 1560	Basic Biology: From Cells to Organisms	
BIOL 2010 & BIOL 2011	Organisms to Ecosystems (Gen Bio) and Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2030 & BIOL 2031	Honors Organisms to Ecosystems (Gen Bio) and Honors Organisms to Ecosystems Lab (Gen Bio)	

BIOL 2020	Molecules to Cells (Gen Bio)	
& BIOL 2021	and Molecules to Cells Lab (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
& BIOL 2041	and Honors Molecules to Cells Lab (Gen Bio)	
Complete two of the following elective courses:		*6*
ANTH 4010	Medical Anthropology: Global Health	
ANTH 4080	Global Health Practice	
ANTH 4290	Anthropology and Public Health	
ANTH 4600	Medical Anthropology	
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4575	Designing Health Messages	
COMM 4620	Health Risk Communication	
ECON 4660	Health Economics.	
ENVS 1342	Environment, Society and Sustainability	
ETST 3002	Ethnicity, Health and Social Justice	
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4235	GIS Applications in the Health Sciences	
HEHM 3100	Introduction to Health Humanities	
HEHM 3570	Death & Dying: Social & Medical Perspectives	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PBHL 2052	Global Demography and Health	
PBHL 3002	Ethnicity, Health and Social Justice	
PBHL 3010	Human Sexuality and Public Health	
PBHL 3021	Fundamentals of Health Promotion	
PBHL 3031	Health, Human Biology and Behavior	
PBHL 3041	Health, Culture and Society	
PBHL 3050	Decision Making	
PBHL 3051	Mental Illness and Society	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PBHL 3081	Health in the City: Urban Health	
PBHL 3091	Live Long and Prosper: Public Health & Aging	
PBHL 3200	Human Migration: Nomads, Sojourners, and Settlers	
PBHL 3440	Medical Sociology	
PBHL 3939	Internship	
PBHL 3999	Special Topics in Public Health	
PBHL 4020	Global Health: Comparative Public Health Systems	
PBHL 4021	Community Health Assessment	
PBHL 4031	Ethnographic Research In Public Health	
PBHL 4070	Health Disparities	
PBHL/ANTH 4080	Global Health Practice	
PBHL/ANTH 4090	Psychedelic Anthropology	
PBHL 4110	Public Health Perspectives On Family Violence	
PBHL 4200	The Global HIV/AIDS Epidemic	
PBHL 4620	Health Risk Communication	
PBHL 4840	Independent Study	
PBHL 4880	Directed Research	
PBHL 4995	Global Study Topics	
PBHL 4999	Topics in Public Health	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	

PSCI 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4330	U.S. Health Policy
PSYC 3262	Health Psychology
PSYC 3265	Drugs, Brain and Behavior
PSYC 3305	Abnormal Psychology
PSYC 3822	Aging, Brain and Behavior
SOCY 3440	Medical Sociology
SOCY 3570	Death & Dying: Social & Medical Perspectives
SOCY 4110	Sociology of Health Care
SOCY 4220	Population Change and Analysis
SOCY 4290	Aging, Society and Social Policy
Total Hours	**24**

[1] Students may elect to take all four of these courses in lieu of taking two elective courses listed below.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/hbsc/degree-programs/minors/).

Health Humanities

Advisor: Marjorie Levine-Clark
Telephone: 303-315-7010
E-mail: Marjorie.Levine-Clark@ucdenver.edu

Overview

Health Humanities is an undergraduate interdisciplinary minor that highlights humanities and related social science approaches to medicine and health. The health humanities offer insight into the human condition as it pertains to the arts and sciences of healing and deepens understanding of disease and wellness, pain and suffering, personhood, the nature of death and dying, embodied experience, and the limits of technological knowledge. Attention to literature, history, philosophy, rhetoric, and the arts reveals the ethical, cultural, and social contexts of health and medicine.

Who is this minor for?

- **Everyone!** Humanistic studies of health provide an excellent addition to science-based curricula and also a stand-alone program that addresses many current issues and interests.
- **Premed students:** Medical school admissions committees actively seek students with strong humanities and liberal arts backgrounds.

Key Learning Outcomes:

- Students will utilize humanistic perspectives to analyze approaches and practices related to health and medicine.
- Students will critically analyze historical and contemporary connections among health, medicine, and society.
- Students will demonstrate understanding of the historical, cultural, and political contexts of theories and practices related to health and medicine.

Programs

- Health Humanities Minor (p. 557)

Faculty

Associated Faculty:

Jimi Adams, Health and Behavioral Sciences
Peter Anthamatten, Geography and Environmental Sciences
Yvette Bueno-Olson, Communication
Kari Campeau, English
Colleen Donnelly, English
Gabriel Finkelstein, History
Joseph Gal, School of Medicine
Daniel Goldberg, Center for Bioethics and Humanities
Rachel Harding, Ethnic Studies
Sarah Horton, Anthropology
Philip Joseph, English
Lisa Keranen, Communication
Marjorie Levine-Clark, History
Hyeyoung Oh Nelson, Health and Behavioral Sciences
Tamara Powell, Communication
Tony Robinson, Political Science
Ronica Rooks, Health and Behavioral Sciences
Christine Sargent, Anthropology
Candice Shelby, Philosophy
Karen Spencer, Health and Behavioral Sciences
David Tracer, Public Health and Health and Behavioral Sciences
Greg Whitesides, History
Margaret Woodhull, Humanities
Sara Yeatman, Health and Behavioral Sciences

Health Humanities (HEHM)

HEHM 3100 - Introduction to Health Humanities (3 Credits)
This course introduces students to the rich field of medical humanities. It examines how various disciplines analyze relationships among culture, society and medicine, and what humanistic approaches can teach us about biomedical theory and health care training and practice. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HEHM 3570 - Death & Dying: Social & Medical Perspectives (3 Credits)
Focusing on death, dying and bereavement using medical and social perspectives, this course explores how illness, prolonged dying and sudden death impact care providers, families and communities. Discussion, film, readings and music address the connection of social and medical issues. Cross-listed with SOCY 3570. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

HEHM 3840 - Independent Study (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

HEHM 4840 - Independent Study (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HEHM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Health Humanities Minor

Introduction

Please click here (p. 556) to see Health Humanities department information.

The Health Humanities minor critically analyzes historical and contemporary connections among health, medicine, and society. The minor deepens understandings of disease and wellness, pain and suffering, personhood, the nature of death and dying, embodied experience, and the limits of technological knowledge. Studying literature, history, philosophy, rhetoric, the arts, and related social science fields, HEHM students explore the human dimensions of medical practice and how they interact with lived experience, revealing the ethical, cultural, and social contexts of health and medicine.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor. Students declaring a minor in HEHM must have at least a 2.5 over GPA.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours taken from the approved courses.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours in the minor taken from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty taken from the approved courses.

Program Restrictions, Allowances and Recommendations

1. Students may only count **one** relevant transfer course toward their elective requirements for the minor.
2. Students may double count no more than two courses from their major toward the minor elective requirements.
3. Students may take any of the courses from the capstone list as upper division electives.
4. Upper division level electives may carry prerequisites that must be completed before enrolling.

Code	Title	Hours
Take the following required course:		*3*
HEHM 3100	Introduction to Health Humanities	
Take three of the following upper division electives from at least two different disciplines: [1]		*9*
ANTH 3150	Special Topics in Medical Anthropology	
ANTH 3202	Anthropology of Health Care Policy	
ANTH 3666	Anthropology of Death	
ANTH 4010	Medical Anthropology: Global Health	
ANTH 4290	Anthropology and Public Health	
ANTH 4300	Migrant Health	
ANTH 4600	Medical Anthropology	
ANTH 4800	Special Topics in Medical Anthropology	
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4558	Digital Health Narratives	
COMM 4575	Designing Health Messages	
COMM 4620	Health Risk Communication	
ENGL 4290	Rhetoric and the Body	
ENGL 4745	Humanistic Writing About Medicine and Biology	
ENGL 4755	Illness & Disability Narrative	
ETST/PBHL 3002	Ethnicity, Health and Social Justice	
GEOG 3501	Geography of Health	
GEOG 4235	GIS Applications in the Health Sciences	
GEOG 4710	Disasters, Climate Change, and Health	
HIST 4347	History of Biology	
HIST 4348	Mind and Malady: A History of Mental Illness	
HIST 4503	Topics in History of Science	
HIST 4840	Independent Study: HIST (see Professor Levine-Clark for specific topics)	
PBHL 3030	Health Policy	
PBHL 3031	Health, Human Biology and Behavior	
PBHL 3041	Health, Culture and Society	
PBHL 3051	Mental Illness and Society	
PBHL 3070	Perspectives in Global Health	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PBHL 3091	Live Long and Prosper: Public Health & Aging	
PBHL 4020	Global Health: Comparative Public Health Systems	
PBHL 4040	Social Determinants of Health	
PBHL 4070	Health Disparities	
PBHL 4200	The Global HIV/AIDS Epidemic	
PHIL 3340	Investigating Nature: Introduction to the Philosophy of Science	
PHIL 3550	Philosophy of Death and Dying	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSCI 4330	U.S. Health Policy	
PSYC 3262	Health Psychology	

PSYC 3385	Psychology of Mindfulness	
PSYC 3611	Psychology of Women	
PSYC 4485	Psychology of Cultural Diversity	
SOCY/PBHL 3440	Medical Sociology	
SOCY/HEHM 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4050	Health Disparities	
SOCY 4110	Sociology of Health Care	
SOCY 4290	Aging, Society and Social Policy	
Take one of the following Capstone courses, not already completed: [2]		*3*
COMM 4500	Health Communication	
COMM 4525	Health Communication and Community	
COMM 4550	Rhetorics of Medicine & Health	
COMM 4558	Digital Health Narratives	
COMM 4575	Designing Health Messages	
ENGL 4290	Rhetoric and the Body	
ENGL 4755	Illness & Disability Narrative	
HIST/WGST 4345	Gender, Science, and Medicine: 1600 to the Present	
HIST 4348	Mind and Malady: A History of Mental Illness	
PBHL 4200	The Global HIV/AIDS Epidemic	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
Total Hours		**15**

[1] The Upper Division (3000-level and above) elective list is not exhaustive and continues to be updated. One elective course can be a service learning course or independent study approved by an HEHM advisor. **Students may take any of the courses from the capstone list as upper division electives.**

[2] These courses incorporate substantial original writing or research projects designed to promote broad reflection about the role of culture, society, and ethics in medicine. Students should choose these courses at the culmination of their minor course work.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/health-humanities/).

History

Chair: Ryan Crewe
Program Assistant: Tabitha Fitzpatrick
Undergraduate Advisor: William Wagner
Graduate Advisor: Peter Kopp
Office: Student Commons Building, 1201 Larimer St., Room 3102
Telephone: 303-315-1776
Fax: 303-315-1780

Overview

The special responsibility of historical studies is understanding the past. History courses integrate many branches of knowledge, cutting across the lines of the social sciences and the humanities, and even the natural sciences. Identifying forces of stability and processes of change, history students develop their research, writing and analytical skills, which serve them well beyond their university years.

Undergraduate Information

Please click here (p. 570) for more information about the requirements for the Major in History.
Please click here (p. 577) for more information about the requirements for the Minor/Online Minor in History.
Please click here (p. 580) for more information about the requirements for the Immigration Studies Certificate.
Please click here (p. 582) for more information about the requirements for the Latin American Studies Certificate.

Internships

Students may qualify for internships to earn credit and experience. Students may pursue internships in public policy, law, social work, community organizing, journalism, teaching, and a variety of other job fields. Students interested in pursuing an internship in their chosen job field should speak with the Undergraduate Advisor. Students interested in working in historical institutions can apply for positions with the Center for Colorado and the West, Colorado State Historical Society, Historic Denver, Denver Museum of Nature and Science, the Colorado Railroad Museum, and the National Park Service.

Honors Program

Students with a cumulative GPA of 3.5 or higher in their upper-division history classes are encouraged to submit their HIST 4839 History Seminar thesis papers to achieve a degree awarded with Latin honors: *cum laude*, *magna cum laude* or *summa cum laude.* Eligible students will submit their thesis papers to the Undergraduate Advisor for review by the Undergraduate Honors Committee.

Historical Studies Journal

Since 1983, CU Denver students in history have published this illustrated journal showcasing the most outstanding original research done each year by history students.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/history/) catalog to read about our graduate programs.

Programs

- History, BA (p. 570)
- History, BA with Secondary Teaching Licensure Endorsement (p. 573)
- History Minor (p. 577)
- Immigration Studies Undergraduate Certificate (p. 580)
- Latin American Studies Undergraduate Certificate (p. 582)

Faculty

Professors:

Marjorie Levine-Clark, PhD, University of Iowa

Associate Professors:

Christopher Agee, PhD, University of California, Berkeley
Ryan Crewe, PhD, Yale University
Gabriel Finkelstein, PhD, Princeton University
Peter Kopp, PhD, University of Nevada, Reno
Kariann A. Yokota, PhD, Yale University

Assistant Professors:

Xiaofei Gao, PhD, University of California, Santa Cruz
Rachel Gross, PhD, University of Wisconsin, Madison
Dale Stahl, PhD, Columbia University
William E. Wagner, PhD, University of California, Berkeley

Instructors:

Christine Sundberg, MA, University of Colorado Denver

Associate Professors Clinical Teaching Track:

Brandon Mills, PhD, University of Illinois at Urbana-Champaign
Cameron Blevins, PhD, Stanford University
John G. Whitesides, PhD, University of California, Santa Barbara

Emeritus Professors:

Frederick S. Allen, PhD, Harvard University
Mary S. Conroy, PhD, Indiana University
Rebecca Hunt, PhD, University of Colorado Boulder
Pamela W. Laird, PhD, Boston University
Thomas J. Noel, PhD, University of Colorado Boulder
Carl E. Pletsch, PhD, University of Chicago
Myra L. Rich, PhD, Yale University
James B. Whiteside, PhD, University of Colorado
James B. Wolf, PhD, University of California, Los Angeles

History (HIST)

HIST 1016 - World History to 1500 (3 Credits)
Surveys the rise of civilizations and their interactions from prehistoric to modern times. The emphasis is on the understanding of the various styles or characteristics of civilizations within a global context. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring.

HIST 1026 - World History Since 1500 (3 Credits)
Surveys the interactions of the world's civilizations in modern times. The emphasis is on understanding the concept of modernization within a global context. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring.

HIST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

HIST 1211 - Western Civilization I (3 Credits)
Introduces ancient Mediterranean civilization and the birth of Europe. Covers topics on economics and society, political organization, intellectual history, and art from 3000 B.C. to A.D. 1500. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 1212 - Western Civilization II (3 Credits)
Introduces modern European civilization and its spread over the world. Covers topics on economics and society, political organization, intellectual history, and art from A.D. 1500 to the 20th century. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 1361 - U.S. History to 1876 (3 Credits)
Provides an introduction to the major forces, events and individuals that shaped the historical development of American society, beginning with the European settlement of America and concluding with the Civil War, reconstruction and the early growth of an industrial order. Term offered: fall, spring. Max Hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

HIST 1362 - U.S. History Since 1876 (3 Credits)
Provides an introduction to the major forces, events, and individuals that shaped the historical development of American society from the Civil War to the present. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring, Summer.

HIST 1381 - The History of Now (3 Credits)
Examines several topics of profound interest to historians world wide: nature and technology, secular and religious faiths, and concepts of political union. The experience of the U.S. as it relates to the experiences of other periods and cultures. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

HIST 1400 - Controversies in History (3 Credits)
Examines a variety of cases where historians have significant disagreement or diverse interpretations regarding "what happened" and "why," to come to an understanding of what historians do and how they do it. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring, Summer.

HIST 2001 - The Uses and Misuses of History (3 Credits)
This course examines the uses and misuses of historical interpretation in the public sphere, focusing on how history has been employed over time to persuade or influence public debates. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of HIST courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Term offered: spring, summer, fall. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of HIST courses with a 2.75 GPA in HIST courses
Typically Offered: Fall, Spring, Summer.

HIST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, INTS 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 3031 - Theory and Practice of History: An Introduction to the Major (3 Credits)
Introduces history majors to the discipline at the outset of their course work. Covers historiographical trends and methodologies, and familiarizes students with the various types of research and writing they are likely to encounter in their classes. Note: This course should be taken as early as possible, and must be taken before HIST 4839. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 3070 - Studies in Film History (3 Credits)
Examines the history of cinema from a variety of national perspectives. Topics rotate and may include Silent Era Cinema, Classical Hollywood Film, New Hollywood, French New Wave, German Expressionism, etc. Note: May be taken more than once when topics vary. Cross-listed with ENGL 3070. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

HIST 3121 - The World at War, 1914-1945 (3 Credits)
Examines World Wars I and II as episodes in a protracted conflict among the nations of the capitalist West, the emerging states of Asia and the colonial world, and the USSR. Studies the causes and consequences of the wars. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

HIST 3230 - The American Presidency (3 Credits)
Explores the presidency in U.S. History. Topics include: ideological and constitutional foundations; expansion of presidential power in domestic politics and international relations; evolution of presidential campaigns; and dimensions of presidential leadership in politics, society and culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3231 - Famous U.S. Trials (3 Credits)
Interested in Law School? . . . This introduction to the history of the U.S. trial court system contextualizes significant trials in historic and cultural moments. The course explores the roles of legal communication and mass communication in contemporary representations of trials. Cross-listed with COMM 3231. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3232 - The American Colonies to 1750 (3 Credits)
The maturation of the American colonies within the British Empire, the development of commercial and intellectual centers, the creation of uniquely American politics, and the unfolding of critical differences between North and South. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3235 - U.S. Labor History, 1800 to the Present (3 Credits)
Explores the experiences, contributions, and struggles of working-class Americans from the Civil War to the present. Areas of focus include pre-industrial and post-industrial labor, slavery, agricultural labor, gender and working class culture outside of the work place. Particular attention is paid to immigration, ethnicity, race and gender, as they relate to the history of America's laboring class. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3260 - Introduction to Digital Studies (3 Credits)
Develop marketable skills such as building websites, making interactive maps, recording podcasts, and analyzing data while also studying the cultural and ethical dimensions of these technologies. Cross-listed with HIST 5260, COMM 3081, and COMM 5081. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3297 - Social History of Asian Americans (3 Credits)
Introductory-level course surveys the social history of Asian American groups from the mid-19th century to the present. We will examine immigration patterns, the development of communities, social and economic problems, and anti-Asian movements and activities. Cross-listed with ETST 3297. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3343 - Women & Gender in US History (3 Credits)
This course will explore women and gender as drivers of US history. From politics to popular culture, jobs to sexual empowerment, civil rights to economic restructuring, we will use gender as a lens to re-envision familiar stories about American history. Cross-listed with WGST 3343, WGST 5343, and HIST 5343. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3345 - Immigration and Ethnicity in American History (3 Credits)
Explores the personal and collective experience of immigrants to America. Discusses problems of assimilation, urban and rural experiences, and implications for politics, the economy and social attitudes. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

HIST 3347 - African-American History, 1619-Present (3 Credits)
Explores the African-American experience, including definitions of citizenship, strategies for protest and resistance, models of leadership, religious life and cultural expression, divisions of class, color and gender. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3348 - The African-American Protest Tradition, 1865 - Present (3 Credits)
Examines a series of influential African-American activists and considers such themes as intra-racial divisions, Pan-Africanism, black nationalism, the use of the courts and legal efforts, and black conservatism. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3349 - Social Movements in 20th Century America (3 Credits)
By surveying the major American social movements of the twentieth century, this course will explore how Americans have created categories of race, ethnicity, culture, and sexuality and how elite and marginalized citizens have deployed these categories in politics. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

HIST 3350 - Colonial Latin America (3 Credits)
Surveys the creation of colonial empires by Spain and Portugal, 1492-1808. Topics include Native American responses to European incursions, women in colonial society, and slavery in Latin America. Cross-listed with ETST 3350 and HIST 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3360 - Denver History (3 Credits)
Introduces the social, political, economic, and cultural life of this mile high metropolis. Founded in the 1858 gold rush, Denver has grown into a five-county metropolis of over two million. Explore this boom and bust history in lectures, slide shows and walking tours. This course offers students a chance to do their own primary source research project, as well as exams and book reports. Note: Open to all students. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3364 - Native Americans and Spaniards in North America (3 Credits)
Examines the interactions between Native Americans and Spanish invaders beginning in the 16th century. The course explores the impact of colonialism in what is today the American Southwest. Focuses on Native American adaptation and resistance to the European presence. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3365 - Aztlan in the United States: Chicano History from 1821 (3 Credits)
Explores the impact of U.S. rule on the Southwest, paying particular attention to legal, economic, and social changes that created new political and cultural identities in the Southwest. Cross-listed with ETST 3365. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3366 - Nature and Power in American History (3 Credits)
This course explores the relationships between human societies and environmental change in the history of North America. Cross-listed with HIST 5366. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3396 - History of the American Indian (3 Credits)
Indigenous nations in North America comprise hundreds of diverse cultures. This course examines U.S. Indian policy and how indigenous nations responded; how they creatively adapted, and resisted cultural change; and how they continue to persist culturally, socially, and politically. Cross-listed with ETST 3396. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.
Typically Offered: Spring.

HIST 3451 - Introduction to African History (3 Credits)
By looking at specific examples of the cultural, political, and economic experience of African society, this course attempts to introduce and make comprehensive the diverse history of the people of Africa. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3460 - Modern Latin American History (3 Credits)
Surveys the historical development of the modern Latin American countries, beginning with the independence movements of the early 19th century. Emphasizes the 20th century issues and problems that have characterized these countries and affected their relations with the United States. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5460. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3469 - Intro to East Asia: To 1800 (3 Credits)
This course introduces the history of China, Japan and Korea to 1800 focusing on political, economic and social changes. It is designed for lower division undergraduates with no background in Asian history. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3470 - Intro to East Asia: Since 1800 (3 Credits)
This course introduces the history of China, Japan and Korea from 1800 to the present, focusing on political, economic and social changes. It is designed for lower division undergraduates with no background in Asian history. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3480 - Introduction to European History (3 Credits)
This course examines the major events and influences that have shaped modern Europe, including monarchies, the Enlightenment, the Industrial Revolution, the rise of political ideologies, the French and Russian Revolutions, capitalism, imperialism, and two World Wars in the twentieth century. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: spring, summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.
Typically Offered: Fall, Spring, Summer.

HIST 3481 - Ancient Greece (3 Credits)
A history of the Greek-speaking world, from the Bronze Age depicted in Homer's epics to Alexander the Great and the Hellenistic Kingdoms. The course addresses the political, intellectual, socioeconomic, and military history of the eastern Mediterranean, with an emphasis on Greece. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3482 - Rome: City and Empire (3 Credits)
Pagan Rome from its earliest beginnings to the rise of Christianity. Emphasis is on the military, socio-economic, and political history of Rome, its empire in Italy, and its domination of the Mediterranean World (ca. 800 B.C. to A.D. 300). Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3484 - British Isles to 1714 (3 Credits)
A sampler of the rich, diverse, and dramatic history of the peoples of the British Isles. State formation, economic and social change and cultural values are several of the themes threaded through this survey course. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3485 - British Isles Since 1714 (3 Credits)
This course examines the dramatic rise of the British industrial, commercial, and political empire during the 18th and 19th centuries and its equally dramatic decline in the 20th century. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3486 - Renaissance and Reformation (3 Credits)
Explores the late 13th through middle 17th centuries when European art and culture changed dramatically, and when Europe was torn by explosive ideological conflicts and religious upheaval. Cross-listed with RLST 3486. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3487 - Medieval Europe (3 Credits)
Surveys the general history of Europe from the fall of Rome to the opening of modern Europe. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3488 - Tudor-Stuart England (3 Credits)
England's rise from obscurity in 1487 to the dawn of her age of European and world dominance in the early 18th century. Family life and popular culture as well as Henry VIII, Queen Elizabeth, Parliament, and Cromwell. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3500 - African History in Novels and Films (3 Credits)
Introduces modern Africa through the eyes of creative artists. Various topics, such as childhood, religion, and colonialism, are presented from various points of view--African and non-African. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3601 - Colorado History (3 Credits)
Presents the story of the people, society, and culture of Colorado from the earliest Native Americans, through the Spanish influx, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern twentieth-century state. Term offered: spring, fall, summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

HIST 3606 - Science, Technology, and Society in the Modern World (3 Credits)
Examines the relationships among science, technology, and society from the early 19th century to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 3616 - Global History of Energy (3 Credits)
Explores the history of human energy use on local, national, and international scales, examining its social, political, and economic effects, and its implications for the environment. Cross-listed with HIST 5616. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3706 - Age of Revolution (3 Credits)
Examines revolutions in selected societies around the world during the period from 1750 to 1950. The specific revolutions chosen may vary, but representative upheavals in both the Western and non-Western worlds are examined. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 3810 - Topics (3 Credits)
Topics in history with varying subtitles reflecting course content.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

HIST 3840 - Independent Study: History (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HIST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have 15 hours of HIST courses completed with 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: spring, summer, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of HIST courses with a 2.75 GPA in HIST courses
Typically Offered: Fall, Spring, Summer.

HIST 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

HIST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with CHIN 4002, ETST 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 4027 - Enlightenment and Revolution (3 Credits)
In this course students explore the relationship of ideas and events in Europe during the 17th and 18th centuries. Modernizing trends in the European economy, religion, science, states and international affairs leading up to the French Revolution. Cross-listed with HIST 5027. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4028 - Nations and Classes: 19th Century Europe (3 Credits)
Focuses on material and ideological changes in 19th century Europe, exploring social, cultural, political, economic, and intellectual developments. Cross-listed with HIST 5028. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4029 - Age of Anxiety in Europe (3 Credits)
Looks at Europe at the end of the nineteenth century in an effort to determine if there is any relation between the peculiarities in culture at the time and the horrors in politics that followed. Cross-listed with HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4030 - Europe During the World Wars (3 Credits)
Covers the history of the two world wars and their origins, political and social upheaval during the interwar economic crisis, the rise of communism, Italian fascism and Nazism, with an emphasis on cultural production and intellectual life. Cross-listed with HIST 5030. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4031 - Contemporary Europe (3 Credits)
History of Europe since 1945. Students study the economic, social, and political history of Europe since World War II, with a special emphasis on the Cold War and intellectual currents. Cross-listed with HIST 5031. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4032 - Globalization in World History Since 1945 (3 Credits)
An interdisciplinary course on contemporary world history and globalization. While the course is historically structured, economic, political, and sociological matters are explored. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5032. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

HIST 4034 - Core Themes in European History (3 Credits)
Core themes in modern Europe, 1750 to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4035 - Crisis and Transformation: Europe's 20th Century (3 Credits)
This course examines 20th century European history focusing on themes of crisis and transformation. We will explore how devastating wars, economic depression, stark ideological divisions, and revolutionary social, political and cultural movements dramatically changed Europe over the course of the century. Cross-listed with HIST 5035. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4046 - Victorians and Victorianism (3 Credits)
Taking an interdisciplinary perspective, this course examines English people and English life during the reign of Queen Victoria, 1837-1901. What were the defining features of the Victorian age? What did it mean to be "Victorian?" When and why did the Victorian paradigm break down? Cross-listed with HIST 5046. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4051 - Britain and The Empire (3 Credits)
Examines 19th and 20th century British history, addressing social, cultural, and political themes. Explores industrialization, state growth, and imperialism; relationships between race, gender, and class; and the ways in which colonizers and the colonized experienced empire. Cross-listed with HIST 5051. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4055 - The Atlantic Slave Trade: Africa, Caribbean and U.S. (3 Credits)
Presents a broad overview of the slave trade in the Atlantic World, including discussion of the slave plantation, the creation of Caribbean societies and the consequences of independence from Britain. Cross-listed with HIST 5055. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4062 - Modern France, 1789 to the Present (3 Credits)
Considers the shaping of modern France from the 18th century Bourbon Monarchy and aristocratic society to today's liberal democracy, in which multiculturalism, globalization and supranational institutions call into question the very nature of French identity. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5062. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4071 - Modern Germany (3 Credits)
Surveys the major political, institutional, social, economic, and cultural developments that have occurred in Germany since the late 18th century. Cross-listed with HIST 5071. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4074 - Post-War Germany (3 Credits)
Historical survey of Germany since the second world war, with an emphasis on culture and society. Cross-listed with HIST 5074. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4075 - Travel Stories and Origins of Cultural Anthropology (3 Credits)
Examines the early history of cultural anthropology by means of classic travel literature. Cross-listed with HIST 5075. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4076 - History of Modern Science (3 Credits)
Surveys the history of science from the 18th century to the present. Treats all disciplines, from physics to physiology, in an attempt to understand how the natural world came to dominate our sense of ourselves. Cross-listed with HIST 5076. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4083 - Russia Since 1917 (3 Credits)
Studies the development of the Soviet Union from its formation in the October Revolution, through the Civil War, the new economic policy, industrialization, collectivism, the Stalinist purges, up to the present. Cross-listed with HIST 5083. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4086 - Eastern Europe (3 Credits)
Studies the countries of Eastern Europe from their origins in the Middle Ages to the present. Cross-listed with HIST 5086. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4133 - Management of Material Culture and Museum Collections (3 Credits)
This course provides in-depth knowledge of the rudiments of material culture documentation, preservation and management. While we have designed this class for those interested in working in history museums, this is also appropriate for those students who want to learn the place of artifacts in studying history. Cross-listed with HIST 5133. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4201 - Core Themes in U.S. History (3 Credits)
This course surveys major themes in U.S. history. Cross-listed with HIST 5201. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4209 - Race, Religion, and Belonging (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 4030, ETST 5030, RLST 4030, RLST 5030 and HIST 5209. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4210 - The American Revolution (3 Credits)
The crisis of the British Empire in North America from the end of the French and Indian War to the ratification of the American Constitution. Topics include the emerging economy, constitutional arguments against Britain, the conduct of the war, and the definition of a republic. Cross-listed with HIST 5210. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4212 - Civil War and Reconstruction (3 Credits)
Begins with the causes and outbreak of the American Civil War, describes the military conflict and the social aspects of the war, examines the federal efforts to reconstruct the southern states, and protect the rights of Black citizens after 1865. Cross-listed with HIST 5212. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4213 - The Gilded Age and Early 20th Century Challenges: U.S. History, 1865-1932 (3 Credits)
Topical study of major events in America, including Reconstruction; the rise of industry and the workers' response; westward expansion and the plight of Native Americans; urbanization and immigration; agrarian upheaval; Progressivism; World War I; the challenges of the 1920s and the onset of the Great Depression. Cross-listed with HIST 5213. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4216 - History of American Popular Culture (3 Credits)
Explores American popular culture from the early 1800s to the present. By tracing the development of various entertainment media, including theater, music, movies, and television sitcoms, this course probes how popular culture both reflected and shaped American values and behavior. Cross-listed with HIST 5216. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4217 - Consumer Culture (3 Credits)
This interdisciplinary course examines the dynamics of the consumer culture in the context of social, economic, and technological history. The analysis begins with 17th century European origins, and continues through recent world developments, emphasizing the U.S. since 1800. Note: Open to all students. Cross-listed with HIST 5217. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4219 - Depression, Affluence and Anxiety: U.S. History, 1929 to the Present (3 Credits)
Examines major developments, focusing on the causes of the Depression and efforts to combat it; World War II and postwar readjustments; the Cold War and challenges of world leadership; unparalleled prosperity; Civil Rights movement; the Vietnam War; and economic uncertainties amidst general prosperity. Cross-listed with HIST 5219. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4220 - U.S. Foreign Policy Since 1912 (3 Credits)
The main thrust is the emergence of the U.S. from isolation toward full-scale participation in the affairs of Europe and other areas. Special attention is given to U.S. intervention in two world wars, the Cold War, and the over extension of U.S. commitments since 1960. Cross-listed with HIST 5220. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4222 - U.S. Society and Thought to 1860 (3 Credits)
Major topics include the evolution of Protestantism from Puritans to Transcendentalists; humanitarian reforms such as abolition, temperance, and women's rights; European influences on American thought; the effect of industrialization on the development of class society; and American nostalgia for agrarian life. Cross-listed with HIST 5222. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4223 - U.S. Society and Thought Since 1860 (3 Credits)
Topical survey of the main currents of American thought and their impact upon society. Topics include American philosophy, literature (extensively), art, music, immigration and urbanization, technology, extremism of both left and right, and education. Cross-listed with HIST 5223. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4225 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color – all fought for their own "right to the city". Cross-listed with HIST 5225, WGST 4225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4226 - Capitalism in America (3 Credits)
Explores the social, cultural, and political history of American capitalism from colonial times. Topics include entrepreneurship, labor, territorial and trading expansion, industrialization, the rise of corporations, economic cycles, technological developments, and the role of the state, all within global contexts. Cross-listed with HIST 5226. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4227 - American West (3 Credits)
Introduces the diverse peoples, places, and approaches to the development of the trans-Missouri West from prehistoric times to the present. Cross-listed with HIST 5227. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4228 - Western Art and Architecture (3 Credits)
Introduces art and architecture of the American West, emphasizing their historical context. Students are required to do book reports and a research paper. Course includes walking tours and museum visits. Cross-listed with HIST 5228. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4229 - Colorado Historic Places (3 Credits)
Introduces community architecture, folklore, and history for all students. Students learn how to survey, describe, and designate significant historical structures and districts. Cross-listed with HIST 5229. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4230 - Women in the West (3 Credits)
Focuses on ways in which women, from the mid-19th century through the mid-20th century, of different races, classes, and ethnic background, have interacted and been active participants in the development of the Western states. Cross-listed with HIST 5230 and WGST 4230/5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4231 - History in Museums (3 Credits)
This core course for the museum studies area of public history introduces students to the theory and practice of museum operations. It covers the basics of museum administration, museum collection and preservation, and museum interpretation from both theoretical and practical points of view. Cross-listed with HIST 5231. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4232 - Historic Preservation (3 Credits)
Introduces the history, methodology, and goals of historic preservation. Guest speakers, field trips, research projects, and book reports. Cross-listed with HIST 5232. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4234 - History at Work: Public and Community History (3 Credits)
An overview of history outside the academic setting. Students have the opportunity to learn about jobs through on-site visits and presentations made by people engaged in a wide variety of occupations in history other than teaching. Cross-listed with HIST 5234. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4236 - Colorado Mining and Railroads (3 Credits)
Focuses on the transportation network that shaped the inland West, and its key role in the extractive industry that gave Colorado its start and nourished the highest state through adolescence. Cross-listed with HIST 5236. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4238 - U.S. History Through Fiction (3 Credits)
Explores American history through novels, based on the idea that fiction offers a superb "window" through which to view the past, especially to understand the texture of American society. Cross-listed with HIST 5238. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4240 - National Parks History (3 Credits)
Introduces how the National Park Service uses history to identify, designate, preserve, and interpret America's most outstanding historic and natural history sites. After tours of NPS sites, students select from a wide range of projects. Note: Open to all students. Cross-listed with HIST 5240. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4242 - Oral History (3 Credits)
Trains public history students in the collection of oral history interviews. Students master core readings on the theory, practice, and ethics of oral history. Cross-listed with HIST 5242. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4243 - Public History Administration (3 Credits)
Introduces students to the skills, practice, and ethics of public history administration. Cross-listed with HIST 5243. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4244 - Interpretation of History in Museums: Exhibits and Education (3 Credits)
This course allows students to gain in-depth knowledge of historical interpretation through exhibits and education in a museum setting. This class is designed for those preparing to work in history museums but is also appropriate for teachers and others who want to learn how museum programs interpret history with artifacts and other historical materials. Cross-listed with HIST 5244. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4245 - Heritage Tourism (3 Credits)
History and historic sites have become big business in 21st century tourism. The heritage tourism industry is explored in this introductory course for all interested students focusing on how academic history and historians can partner with tourism and recreation interests. Cross-listed with HIST 5245. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4261 - Working With Data (3 Credits)
Teaches the technical skills of data collection, processing, analysis, and visualization, along with the history and ethics of how societies, corporations, and governments have used and abused data over time. Cross-listed with HIST 5261. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4303 - Sex and Gender in Modern Britain (3 Credits)
Examines modern British history by focusing on sex and gender as central aspects in people's lives. Considers the ways gender shapes the realms of politics, economics, society and culture in Britain from the 18th century to the present. Cross-listed with HIST 5303 and WGST 4303/5303. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 4306, 5306, HIST 5306, WGST 4306, 5306. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4307 - History of Sexuality (3 Credits)
Explores the relationships between gender and norms, sexual practice, and ideas about sexuality in Europe and the United States. Examines how sex and sexuality have changed over time and how those changes relate to social, cultural, political and economic history. Cross-listed with HIST 5307 and WGST 4307/5307. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4308 - Crime, Policing, and Justice in American History (3 Credits)
Focuses on changing legal and cultural definitions of crime, the role of the police, the evolution of punishment in theory and practice, and the role of mass culture in shaping the social history of crime and justice. Cross-listed with HIST 5308. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4345 - Gender, Science, and Medicine: 1600 to the Present (3 Credits)
Examines the ways science and medicine have both shaped and been shaped by ideas about gender. Pays particular attention to the relationship between scientific/medical ideas about the sexes and the social organization of gender. Cross-listed with HIST 5345 and WGST 4345/5345. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4347 - History of Biology (3 Credits)
Examines the development of modern biology from the mid-18th century to the present. Students will look at intellectual, methodological, institutional and social contexts in an attempt to answer the question of how biology became the "pre-eminent" science. Cross-listed with HIST 5347. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4348 - Mind and Malady: A History of Mental Illness (3 Credits)
Examines the history of mental illness from the mid-18th century to the present, focusing on the institutionalization of the mentally ill, the origin of psychiatry, the development of models of mental illness and the evolution of clinical treatment. Cross-listed with HIST 5348. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4411 - Modern Mexico (3 Credits)
Designed to familiarize students with the critical issues in Mexican political, economic and social history. Traces the emergence of independence and the difficult consolidation of an independent nation state. Cross-listed with HIST 5411, ETST 4411. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4412 - Mexico and the United States: People and Politics on the Border (3 Credits)
Examines the convoluted relations between these two republics, focusing on diplomatic, cultural, and social interactions. Cross-listed with HIST 5412. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4414 - Nationalism and State Building in Latin America, 1750-1850 (3 Credits)
Explores the problems of nationalism and post-colonial state building by examining the late colonial and early national periods of Latin American history. The course discusses the impact of the enlightenment, the events of the Wars of Independence, and the quandaries faced by the new nations. Cross-listed with HIST 5414. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4415 - Social Revolutions in Latin America (3 Credits)
A theoretical framework and an empirical basis for understanding the large-scale social movements that have influenced the course of Latin American nations. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5415. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4416 - The Age of Imperialism (3 Credits)
Examines causes, character, and consequences of imperialism in the industrial era (ca. 1840-1975). Through intense study of selected cases, students gain an understanding of the different dynamics and varieties of imperialist control. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4417 - Commodities and Globalization (3 Credits)
Trading raw material & processed goods internationally has greatly affected world cultures & geopolitics. Tracing commodity chains since 1500 for food, fuel, industrial material & products, & intellectual property, this course will conclude with the effects of current regulations, marketing & environmental concerns. Cross-listed with HIST 5417. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4418 - Trade and Premodern World History (3 Credits)
Explores the interconnections that shaped premodern world history, considering the ways that the production, exchange, and consumption of cloth were tied to specific forms of political power, social and religious organization, and long distance economic relationships. Cross-listed with HIST 5418. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4420 - Traditional China: China to 1600 (3 Credits)
A general introduction to the history of China from the advent of historic civilization to the point of the great encounter with the West. Cross-listed with HIST 5420. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4421 - Modern China (3 Credits)
Surveys Chinese history in the modern era. Includes examination of Western domination of China; revolution and internal fragmentation of China; Japanese attacks and World War II; and civil war and the communist revolution. Cross-listed with HIST 5421 and CHIN 4421. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4422 - Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76 (3 Credits)
Introduces students to ordinary people's daily life in Mao's China (1949-1976) through an exploration of material culture, movies and scholarship. This course pays particular attention to the ways people's everyday living intertwined with politics. Cross-listed with HIST 5422. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4423 - China in the World (3 Credits)
China does not exist apart from the world, and never has. This course approaches Chinese history by asking: how has the world shaped China's history, and how has China shaped the history of the world? Rather than explain what went on in China, we focus on exploring what went on outside-among China's immediate neighbors in East Asia, the entire Eurasian region, the African continent, and the so-called "West." The course moves chronologically from ancient times to the present, and is organized around the themes as conquest, trade, international relations, climate change, environmental stress, and the circulation of ideas. Cross-listed with HIST 5423 and CHIN 4423. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4431 - Modern Japan (3 Credits)
Course of Japanese history since the Perry expedition. Covers Japanese Westernization and industrialization, the expansion of empire and defeat in World War II, the occupation, and the amazing technological and social transformation since the occupation years. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5431. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4451 - Southern Africa (3 Credits)
An in-depth history of the clash of peoples and cultures in Africa south of the Zambezi River. African and Afrikaner political, economic and cultural development in a single land and the consequences of several competing nationalisms existing side by side are examined. Apartheid and African opposition to it are analyzed. Cross-listed with HIST 5451. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4455 - African Struggle for Independence (3 Credits)
An assessment of African leadership from the colonial era to the present. Cross-listed with HIST 5455. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4461 - The Modern Middle East (3 Credits)
Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5461. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4462 - Islam in Modern History (3 Credits)
This course studies Islamic thought and practice over the last two centuries in terms of major historical processes that have operated at local, national, and global scales. Cross-listed with HIST 5462, RLST 4462, RLST 5462. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4471 - The Second World War (3 Credits)
The War in its totality: causes, military strategies (equal treatment to European and Pacific theaters), campaigns, impact of technology and weapons, political and social upheaval. Cross-listed with HIST 5471. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4472 - The 1950s: Korean War, the Cold War and Social Transformation (3 Credits)
A critical and methodical exploration of several of the social, cultural, and political events of the 1950s. Investigates the complex interaction between politics and culture during this decade, paying close attention to anti-Communist thought and the Korean War. Cross-listed with HIST 5472. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4475 - The Vietnam War (3 Credits)
Covers the conflict in Vietnam, with roots in the period prior to World War II. Main topics include the rise of nationalism in French Indochina, the war against the French, the Northern move to unify Vietnam, American intervention, and eventual victory of the Northern regime. Cross-listed with HIST 5475. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4490 - Weapons of Mass Destruction (3 Credits)
Weapons of mass destruction have affected politics, health, and environments around the globe. This course will examine the development, use, and consequences of these modern technologies of war and terror. Cross-listed with HIST 5490. Term offered: summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

HIST 4491 - United States History, 1865-1919 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1865 and 1919. The course will be attentive to the diversity of American experiences and will explore domestic and international themes in United States history. Cross-listed with HIST 5491. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4492 - United States History, 1919-1945 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1919 and 1945. The course will be attentive to the diversity of American experiences and will explore both domestic and international themes in United States history. Cross-listed with HIST 5492. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4493 - United States History, 1945-1973 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1945 and 1973. The course will be attentive to the diversity of American experiences and will explore both domestic and international themes in United States history. Cross-listed with HIST 5493. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4494 - Red and Blue America: U.S. History, 1973-Present (3 Credits)
This course explores American history during a period of immense cultural and political polarization. After 1973, the United States experienced the rise of the New Right, changing attitudes towards sexual "permissiveness," and rapid advancements in technology. Both "law-and-order" politics and the rights campaigns led by immigrants, women, people of color, and LGBTQ+ peoples all reshaped democracy. These developments in the United States, meanwhile, influenced and were shaped by the nation's "hot" and "cold" conflicts in Europe, Latin America, the Middle East, and the rest of the globe. Cross-listed with HIST 5494, WGST 4494, and WGST 5494. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4503 - Topics in History of Science (3 Credits)
Themes vary from year to year. Possible topics: Darwinism, Nature of Memory, Time and Space, Origins. Cross-listed with HIST 5503. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4504 - Animals in U.S. History (3 Credits)
Human-animal relationships offer powerful and unexpected perspectives on the American past. An eclectic range of readings and viewings, written assignments and contemplative experiences will contextualize contemporary practices, beliefs, and ethics -- vegetarianism, hunting, pet-keeping, and many others -- in historical context. Cross-listed with HIST 5504. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4621 - Explorers and Exploration (3 Credits)
Examines the history of travel and exploration from the 13th century to the present. Readings draw primarily from first-person accounts to understand why people voyage, what they hope to discover, and what happens to them along the way. Cross-listed with HIST 5621. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4622 - Oceans In History (3 Credits)
Explores transoceanic exchanges, relations, and transformations in modern world history. Examines how historians analyze and conceptualize global interactions. Topics include voluntary and forced migrations, resistance and revolution, transoceanic economic relations, piracy, and environmental change. Cross-listed with HIST 5622. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4645 - Archival Management (3 Credits)
This course studies theory and principles pertaining to the management of current and non-current records, public and private archival materials, as well as the administration of archival manuscript depositories for housing records of historical value. Cross-listed with HIST 5645. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4810 - Special Topics (1-3 Credits)
Cross-listed with HIST 5810. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HIST 4839 - History Seminar (3 Credits)
Covers the use of documentary sources and historical criticism, with students utilizing these skills in a historical research paper. Note: Required for history majors. Preferably taken in the senior year. Prereq: HIST 3031 with a grade of C or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: HIST 3031 with a grade of C or higher
Typically Offered: Fall, Spring.

HIST 4840 - Independent Study: HIST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HIST 4849 - Independent Study History Honors Research Paper (3 Credits)
Students competing for history honors must take this course to prepare their honors paper. The course requires students to produce a finished research paper of professional quality under the direction of a history faculty member. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Open to advanced history majors only. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4850 - History in the Community: History Day Mentoring (1-3 Credits)
Directed by CU Denver History faculty, students participate in and judge National History Day in Colorado. They gain teaching experience mentoring students preparing social-studies and literacy-based projects. Their papers are based on scholarly readings and analyses of their experiences in middle and high schools. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of department chair. Department consent required. Term offered: spring. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Spring.

HIST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

History, BA

Introduction

Please click here (p. 559) to see History department information.

The bachelor's degree in history provides students with a firm grounding for advanced studies in education, librarianship, law, business and public service, as well as graduate work in the humanities and social sciences broadly. History is an all-inclusive discipline, making it an excellent choice for students with a wide variety of career goals.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This major can be complete on campus or with a combination of on-campus and online courses. Many core and upper-division courses are offered online.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 HIST credit hours.
2. Students must complete a minimum of 18 upper-division (3000-level and above) HIST credit hours, with a minimum of 15 credit hours at 4000-level or higher.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 HIST credit hours with CU Denver faculty.

Program Allowances or Restrictions

1. 15 of the 18 upper division level credit hours must be taken at the 4000 level, including HIST 4839 History Seminar.

Code	Title	Hours
Complete the following required courses:		*6*
HIST 3031	Theory and Practice of History: An Introduction to the Major [1]	
HIST 4839	History Seminar [1]	
Complete a minimum of six credit hours from each of the following distribution areas. A minimum of three credit hours in each distribution area must be upper-division (3000 and 4000 level).		*18*
United States Distribution (p. 570)		
Europe Distribution (p. 571)		
World Distribution (p. 571)		
Complete a minimum of 12 additional credit hours of HIST electives, not taken already. [2]		*12*
Total Hours		**36**

[1] Students must complete HIST 3031 Theory and Practice of History: An Introduction to the Major with a grade of C or better before enrolling in HIST 4839 History Seminar.

[2] Can be satisfied by a combination of additional history courses, history internships, or history honors independent study for eligible students. **Note**: Any courses listed above may be used to fulfill the elective requirements once the area distributions have been met.

United States Distribution

Code	Title	Hours
Complete a minimum of six credit hours from the following United States distribution area. A minimum of three credit hours must be upper-division (3000 and 4000 level).		*6*
HIST 1361	U.S. History to 1876	
HIST 1362	U.S. History Since 1876	
HIST 1381	The History of Now	
HIST 1400	Controversies in History	
HIST 2001	The Uses and Misuses of History	
HIST 3121	The World at War, 1914-1945	
HIST 3230	The American Presidency	
HIST 3232	The American Colonies to 1750	
HIST 3235	U.S. Labor History, 1800 to the Present	
HIST 3260/ COMM 3081	Introduction to Digital Studies	
HIST/ETST 3297	Social History of Asian Americans	
HIST/WGST 3343	Women & Gender in US History	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3347	African-American History, 1619-Present	
HIST 3348	The African-American Protest Tradition, 1865 - Present	
HIST 3349	Social Movements in 20th Century America	
HIST 3360	Denver History	
HIST 3366	Nature and Power in American History	
HIST/ETST 3396	History of the American Indian	
HIST 3601	Colorado History	
HIST 4133	Management of Material Culture and Museum Collections	
HIST 4201	Core Themes in U.S. History	
HIST 4209/ ETST 4030/ RLST 4030	Race, Religion, and Belonging	
HIST 4210	The American Revolution	

HIST 4212	Civil War and Reconstruction
HIST 4213	The Gilded Age and Early 20th Century Challenges: U.S. History, 1865-1932
HIST 4216	History of American Popular Culture
HIST 4217	Consumer Culture
HIST 4219	Depression, Affluence and Anxiety: U.S. History, 1929 to the Present
HIST 4220	U.S. Foreign Policy Since 1912
HIST 4222	U.S. Society and Thought to 1860
HIST 4223	U.S. Society and Thought Since 1860
HIST/WGST 4225/ GEOG 4625	Urban America
HIST 4226	Capitalism in America
HIST 4227	American West
HIST 4228	Western Art and Architecture
HIST 4229	Colorado Historic Places
HIST/WGST 4230	Women in the West
HIST 4231	History in Museums
HIST 4232	Historic Preservation
HIST 4234	History at Work: Public and Community History
HIST 4236	Colorado Mining and Railroads
HIST 4238	U.S. History Through Fiction
HIST 4240	National Parks History
HIST 4242	Oral History
HIST 4243	Public History Administration
HIST 4244	Interpretation of History in Museums: Exhibits and Education
HIST 4245	Heritage Tourism
HIST 4261/5261	Data: A User Manual
HIST/ENGL/ WGST 4306	Survey of Feminist Thought
HIST 4308	Crime, Policing, and Justice in American History
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation
HIST 4475	The Vietnam War
HIST 4491	United States History, 1865-1919
HIST 4492	United States History, 1919-1945
HIST 4493	United States History, 1945-1973
HIST 4494	Red and Blue America: U.S. History, 1973-Present
HIST 4504	Animals in U.S. History
HIST 4645	Archival Management
Total Hours	**6**

Europe Distribution

Code	Title	Hours
Complete a minimum of six credit hours from the following Europe distribution area. A minimum of three credit hours must be upper-division (3000 and 4000 level).		*6*
HIST 1211	Western Civilization I	
HIST 1212	Western Civilization II	
HIST 1400	Controversies in History	
HIST 3121	The World at War, 1914-1945	
HIST 3480	Introduction to European History	
HIST 3481	Ancient Greece	
HIST 3482	Rome: City and Empire	
HIST 3484	British Isles to 1714	
HIST 3485	British Isles Since 1714	
HIST 3486	Renaissance and Reformation	
HIST 3487	Medieval Europe	
HIST 3488	Tudor-Stuart England	
HIST 3706	Age of Revolution	
HIST 4027	Enlightenment and Revolution	
HIST 4028	Nations and Classes: 19th Century Europe	
HIST 4029	Age of Anxiety in Europe	
HIST 4030	Europe During the World Wars	
HIST 4031	Contemporary Europe	
HIST 4034	Core Themes in European History	
HIST 4035	Crisis and Transformation: Europe's 20th Century	
HIST 4046	Victorians and Victorianism	
HIST 4051	Britain and The Empire	
HIST 4062	Modern France, 1789 to the Present	
HIST 4071	Modern Germany	
HIST 4074	Post-War Germany	
HIST 4083	Russia Since 1917	
HIST/WGST 4303	Sex and Gender in Modern Britain	
HIST/ENGL/ WGST 4306	Survey of Feminist Thought	
HIST/WGST 4307	History of Sexuality	
HIST 4347	History of Biology	
HIST 4348	Mind and Malady: A History of Mental Illness	
HIST 4471	The Second World War	
HIST 4621	Explorers and Exploration	
Total Hours		**6**

World Distribution

Code	Title	Hours
Complete a minimum of six credit hours from the following World distribution area. A minimum of three credit hours must be upper-division (3000 and 4000 level).		*6*
HIST 1016	World History to 1500	
HIST 1026	World History Since 1500	
HIST 3121	The World at War, 1914-1945	
HIST/ETST 3350	Colonial Latin America	
HIST 3364	Native Americans and Spaniards in North America	
HIST 3451	Introduction to African History	
HIST 3460	Modern Latin American History	
HIST 3469	Intro to East Asia: To 1800	
HIST 3470	Intro to East Asia: Since 1800	
HIST 3500	African History in Novels and Films	
HIST 3606	Science, Technology, and Society in the Modern World	

HIST 3616	Global History of Energy
HIST 4032	Globalization in World History Since 1945
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.
HIST 4075	Travel Stories and Origins of Cultural Anthropology
HIST 4076	History of Modern Science
HIST/ETST 4411	Modern Mexico
HIST 4412	Mexico and the United States: People and Politics on the Border
HIST 4414	Nationalism and State Building in Latin America, 1750-1850
HIST 4415	Social Revolutions in Latin America
HIST 4416	The Age of Imperialism
HIST 4417	Commodities and Globalization
HIST 4418	Trade and Premodern World History
HIST 4420	Traditional China: China to 1600
HIST 4421	Modern China
HIST 4422	Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76
HIST 4431	Modern Japan
HIST 4451	Southern Africa
HIST 4455	African Struggle for Independence
HIST 4461	The Modern Middle East
HIST/RLST 4462	Islam in Modern History
HIST 4490	Weapons of Mass Destruction
HIST 4503	Topics in History of Science
HIST 4621	Explorers and Exploration
HIST 4622	Oceans In History
Total Hours	**6**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/history/bachelor-arts-history/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

History, BA with Secondary Teaching Licensure Endorsement

Introduction

Please click here (p. 559) to see History department information.

The special responsibility of historical studies is to help individuals and communities understand the past. History courses integrate many branches of knowledge, cutting across the lines of the social sciences and the humanities, and even the natural sciences. Identifying forces of stability and processes of change, history students develop research, writing and analytical skills, which serve them well beyond their university years.

By comparing the human conditions over decades or centuries, history students identify fundamental social trends and analyze critical causal factors. The study of history builds confidence for making judgments in many fields of human endeavor and provides insight into current social, political, economic and cultural issues. History is an all-inclusive discipline, making it an excellent choice for students with a wide variety of career goals. The Department of History trains students to be critical thinkers, capable researchers, and careful writers.

The secondary licensure program is a partnership program between the College of Liberal Arts and Sciences (CLAS) and the School of Education & Human Development (SEHD). Secondary Education Licensure students choose a major within CLAS and complete all CORE, CLAS, major, and initial teacher education admission requirements before completing a final professional year of licensure coursework through the SEHD.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor, CLAS advisor and SEHD advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This major can be complete on campus or with a combination of on-campus and online courses. Many core and upper-division courses are offered online.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 HIST credit hours.
2. Students must complete a minimum of 18 upper-division (3000-level and above) HIST credit hours, with a minimum of 15 credit hours at 4000-level or higher..
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 HIST credit hours with CU Denver faculty.

Program Allowances, Restrictions and Recommendations

Students are responsible for meeting with the advisor in the SEHD to confirm teacher education and licensure requirements. In addition to completing all minimum program requirements above, SEHD secondary education students must complete the following minimum SEHD licensure (p. 927) requirements:

1. Complete the Education Declaration form and all subsequent processes and requirements, including a background check, prior to April 1st (for students intending to complete their clinical field experience in fall) or November 1st (for students intending to complete their clinical field experience in spring). Students must meet with the SEHD advisor for detailed information.
2. Student pursuing secondary education licensure must complete the following requirements to be admitted to the Professional (final) Year:
   a. a minimum cumulative CU GPA of 3.0 or higher. Students with a lower GPA may be considered under certain conditions.
   b. all CU Denver Core, CLAS, major, electives, and initial teacher education coursework requirements prior to the start of the Professional Year
   c. the official application and interview process
   d. Deadlines for Professional Year application are February 15th (for students intending to begin Professional Year in fall) or October 1st (for students intending to begin Professional Year in spring).
3. Students must complete all initial teacher education and professional (final) year coursework with a minimum grade of B- or higher.

Code	Title	Hours
Complete the following History degree requirements:		
Complete the following required courses:		*6*
HIST 3031	Theory and Practice of History: An Introduction to the Major	
HIST 4839	History Seminar [1]	
Complete a minimum of six credit hours from each of the following distribution areas. A minimum of three credit hours in each distribution area must be upper-division (3000 and 4000 level).		*18*
United States Distribution (p. 574)		
Europe Distribution (p. 574)		
World Distribution (p. 575)		
Complete a minimum of 12 additional credit hours of HIST electives, not taken already. [2]		*12*
Recommended Courses for Social Studies Licensure		
Secondary Social Studies Recommended Courses (p. 575)		
SEHD Licensure Coursework Requirements:		
SEHD Licensure Coursework Requirements (p. 576)		
Total Hours		**36**

[1] Students must complete HIST 3031 Theory and Practice of History: An Introduction to the Major with a grade of C or better before enrolling in HIST 4839 History Seminar.

[2] Can be satisfied by a combination of additional history courses, history internships, or history honors independent study for eligible students. **Note**: Any HIST courses may be used to fulfill the elective requirements once the area distributions have been met.

United States Distribution

Code	Title	Hours
HIST 1361	U.S. History to 1876 [1]	
or HIST 1362	U.S. History Since 1876	
HIST 1381	The History of Now	
HIST 1400	Controversies in History	
HIST 2001	The Uses and Misuses of History	
HIST 3121	The World at War, 1914-1945	
HIST 3230	The American Presidency	
HIST 3232	The American Colonies to 1750	
HIST 3235	U.S. Labor History, 1800 to the Present	
HIST 3260	Introduction to Digital Studies	
HIST 3297	Social History of Asian Americans	
HIST 3343	Women & Gender in US History	
HIST 3345	Immigration and Ethnicity in American History [2]	
or HIST 3349	Social Movements in 20th Century America	
HIST 3347	African-American History, 1619-Present	
HIST 3348	The African-American Protest Tradition, 1865 - Present	
HIST 3360	Denver History	
HIST 3366	Nature and Power in American History	
HIST 3396	History of the American Indian	
HIST 3601	Colorado History	
HIST 4133	Management of Material Culture and Museum Collections	
HIST 4201	Core Themes in U.S. History	
HIST 4209	Race, Religion, and Belonging	
HIST 4210	The American Revolution	
HIST 4212	Civil War and Reconstruction	
HIST 4213	The Gilded Age and Early 20th Century Challenges: U.S. History, 1865-1932	
HIST 4216	History of American Popular Culture	
HIST 4217	Consumer Culture	
HIST 4219	Depression, Affluence and Anxiety: U.S. History, 1929 to the Present	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4222	U.S. Society and Thought to 1860	
HIST 4223	U.S. Society and Thought Since 1860	
HIST 4225	Urban America	
HIST 4226	Capitalism in America	
HIST 4227	American West	
HIST 4228	Western Art and Architecture	
HIST 4229	Colorado Historic Places	
HIST 4230	Women in the West	
HIST 4231	History in Museums	
HIST 4232	Historic Preservation	
HIST 4234	History at Work: Public and Community History	
HIST 4236	Colorado Mining and Railroads	
HIST 4238	U.S. History Through Fiction	
HIST 4240	National Parks History	
HIST 4242	Oral History	
HIST 4243	Public History Administration	
HIST 4244	Interpretation of History in Museums: Exhibits and Education	
HIST 4245	Heritage Tourism	
HIST 4261	Data: A User Manual	
HIST 4306	Survey of Feminist Thought	
HIST 4308	Crime, Policing, and Justice in American History	
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation	
HIST 4475	The Vietnam War	
HIST 4491	United States History, 1865-1919	
HIST 4492	United States History, 1919-1945	
HIST 4493	United States History, 1945-1973	
HIST 4494	Red and Blue America: U.S. History, 1973-Present	
HIST 4504	Animals in U.S. History	
HIST 4645	Archival Management	

[1] *HIST 1361 U.S. History to 1876 or HIST 1362 U.S. History Since 1876 will fulfill the CU Denver Core Humanities and one U.S. Distribution Course.*

[2] *HIST 3345 Immigration and Ethnicity in American History or HIST 3349 Social Movements in 20th Century America will fulfill CLAS Humanities and one U.S. Distribution Course.*

Europe Distribution

Code	Title	Hours
HIST 1211	Western Civilization I	
HIST 1212	Western Civilization II	
HIST 1400	Controversies in History	
HIST 3121	The World at War, 1914-1945	
HIST 3480	Introduction to European History	
HIST 3481	Ancient Greece	
HIST 3482	Rome: City and Empire	
HIST 3484	British Isles to 1714	
HIST 3485	British Isles Since 1714	
HIST 3486	Renaissance and Reformation	
HIST 3487	Medieval Europe	
HIST 3488	Tudor-Stuart England	
HIST 3706	Age of Revolution	
HIST 4027	Enlightenment and Revolution	
HIST 4028	Nations and Classes: 19th Century Europe	
HIST 4029	Age of Anxiety in Europe	
HIST 4030	Europe During the World Wars	
HIST 4031	Contemporary Europe	
HIST 4034	Core Themes in European History	
HIST 4035	Crisis and Transformation: Europe's 20th Century	
HIST 4046	Victorians and Victorianism	
HIST 4051	Britain and The Empire	

HIST 4062	Modern France, 1789 to the Present
HIST 4071	Modern Germany
HIST 4074	Post-War Germany
HIST 4083	Russia Since 1917
HIST 4303	Sex and Gender in Modern Britain
HIST 4306	Survey of Feminist Thought
HIST 4307	History of Sexuality
HIST 4347	History of Biology
HIST 4348	Mind and Malady: A History of Mental Illness
HIST 4471	The Second World War
HIST 4621	Explorers and Exploration

World Distribution

Code	Title	Hours
HIST 1016	World History to 1500	
HIST 1026	World History Since 1500	
HIST 3121	The World at War, 1914-1945	
HIST 3350	Colonial Latin America	
HIST 3364	Native Americans and Spaniards in North America	
HIST 3451	Introduction to African History	
HIST 3460	Modern Latin American History	
HIST 3469	Intro to East Asia: To 1800	
HIST 3470	Intro to East Asia: Since 1800	
HIST 3500	African History in Novels and Films	
HIST 3606	Science, Technology, and Society in the Modern World	
HIST 3616	Global History of Energy	
HIST 4032	Globalization in World History Since 1945	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
HIST 4075	Travel Stories and Origins of Cultural Anthropology	
HIST 4076	History of Modern Science	
HIST 4411	Modern Mexico	
HIST 4412	Mexico and the United States: People and Politics on the Border	
HIST 4414	Nationalism and State Building in Latin America, 1750-1850	
HIST 4415	Social Revolutions in Latin America	
HIST 4416	The Age of Imperialism	
HIST 4417	Commodities and Globalization	
HIST 4418	Trade and Premodern World History	
HIST 4420	Traditional China: China to 1600	
HIST 4421	Modern China	
HIST 4422	Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76	
HIST 4431	Modern Japan	
HIST 4451	Southern Africa	
HIST 4455	African Struggle for Independence	
HIST 4461	The Modern Middle East	
HIST 4462	Islam in Modern History	
HIST 4490	Weapons of Mass Destruction	
HIST 4503	Topics in History of Science	
HIST 4621	Explorers and Exploration	
HIST 4622	Oceans In History	

Secondary Social Studies Recommended Courses

Code	Title	Hours
In order to prepare for the Social Studies licensure, students should complete all of the following courses:		
These courses will also count toward History, CU Denver and CLAS graduation requirements, as identified.		

Anthropology

Code	Title	Hours
ANTH 1303	Introduction to Biological Anthropology	4
ANTH 2102	Culture and the Human Experience	3

* *ANTH 1303 Introduction to Biological Anthropology Will count as CU Denver Core Nat/Phys Science with lab. ANTH 2102 Culture and the Human Experience will count toward either CU Denver Behavioral Science or CLAS Behavioral Science.*

Economics

Code	Title	Hours
ECON 2012	Principles of Economics: Macroeconomics	3

* *Will count as CU Denver Core Social Sciences or CLAS Social Science.*

Geography

Code	Title	Hours
GEOG 1102	World Regions Global Context	3
GEOG 1202	Introduction to Physical Geography	3

* GEOG 1202 Introduction to Physical Geography *will count as CLAS Nat/Phys Science without lab and GEOG 1102 World Regions Global Context will count as CU Denver Core Social Science or CLAS Social Science.*

History

Code	Title	Hours
HIST 1361	U.S. History to 1876	3
or HIST 1362	U.S. History Since 1876	
HIST 3345	Immigration and Ethnicity in American History	3
or HIST 3349	Social Movements in 20th Century America	

[1] *HIST 1361 U.S. History to 1876 or HIST 1362 U.S. History Since 1876 will the CU Denver Core Humanities and one U.S. Distribution Course.*

[2] *HIST 3345 Immigration and Ethnicity in American History or HIST 3349 Social Movements in 20th Century America will fulfill CLAS Humanities and one U.S. Distribution Course.*

Political Science

Code	Title	Hours
PSCI 1101	American Political System	3
PSCI 3022	Political Systems of the World	3
or PSCI 3042	World Politics	

* PSCI 1101 American Political System is highly recommended and will count as a lower-division level elective credit, toward the overall 120 credit hours required to graduate.

PSCI 3022 Political Systems of the World or PSCI 3042 World Politics will count as CU Denver Core International Perspectives.

Psychology

Code	Title	Hours
PSYC 1005	Introduction to Psychology II	3

* *Will count toward either CU Denver Behavioral Science or CLAS Behavioral Science.*

Sociology

Code	Title	Hours
SOCY 3020	Race and Ethnicity in the U.S.	3

* *Will count as CU Denver Cultural Diversity.*

SEHD Licensure Coursework Requirements

Students must complete SEHD licensure requirements located here (p. 927).

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/history/bachelor-arts-history/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

History Minor

Introduction

Please click here (p. 559) to see History department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program and an online program. Students can complete the minor with all on-campus courses, all online courses, or a mix of on-campus and online courses.

Declaring This Minor

- To declare this minor, contact CLAS advising at CLAS_Advising@ucdenver.edu or visit the CLAS advising office in NC 1030. Students must be in a degree-seeking undergraduate program before they can declare this minor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 HIST credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) HIST credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of 12 HIST credit hours with CU Denver faculty.

Code	Title	Hours
Select a minimum of three credit hours (one course) from each of the following areas:		*9*
United States (p. 577)		
Europe (p. 578)		
World (Africa, Asia, Latin America) (p. 578)		
Select an additional 9 HIST elective credit hours [1]		*9*
Total Hours		**18**

[1] Any courses listed in the distribution areas may be used to fulfill the elective requirements once the area distributions have been met.

United States Distribution

Code	Title	Hours
Complete one of the following United States distribution courses.		*3*
HIST 1361	U.S. History to 1876	
HIST 1362	U.S. History Since 1876	
HIST 1381	The History of Now	
HIST 1400	Controversies in History	
HIST 2001	The Uses and Misuses of History	
HIST 3121	The World at War, 1914-1945	
HIST 3230	The American Presidency	
HIST 3232	The American Colonies to 1750	
HIST 3235	U.S. Labor History, 1800 to the Present	
HIST/ETST 3297	Social History of Asian Americans	
HIST/WGST 3343	Women & Gender in US History	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3347	African-American History, 1619-Present	
HIST 3348	The African-American Protest Tradition, 1865 - Present	
HIST 3349	Social Movements in 20th Century America	
HIST 3360	Denver History	
HIST 3366	Nature and Power in American History	
HIST/ETST 3396	History of the American Indian	
HIST 3601	Colorado History	
HIST 4133	Management of Material Culture and Museum Collections	
HIST 4201	Core Themes in U.S. History	
HIST 4209/ ETST 4030/ RLST 4030	Race, Religion, and Belonging	
HIST 4210	The American Revolution	
HIST 4212	Civil War and Reconstruction	
HIST 4213	The Gilded Age and Early 20th Century Challenges: U.S. History, 1865-1932	
HIST 4216	History of American Popular Culture	
HIST 4217	Consumer Culture	
HIST 4219	Depression, Affluence and Anxiety: U.S. History, 1929 to the Present	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4222	U.S. Society and Thought to 1860	
HIST 4223	U.S. Society and Thought Since 1860	
HIST/WGST 4225/ GEOG 4625	Urban America	
HIST 4226	Capitalism in America	
HIST 4227	American West	
HIST 4228	Western Art and Architecture	
HIST 4229	Colorado Historic Places	
HIST/WGST 4230	Women in the West	
HIST 4231	History in Museums	
HIST 4232	Historic Preservation	

HIST 4234	History at Work: Public and Community History
HIST 4236	Colorado Mining and Railroads
HIST 4238	U.S. History Through Fiction
HIST 4240	National Parks History
HIST 4242	Oral History
HIST 4243	Public History Administration
HIST 4244	Interpretation of History in Museums: Exhibits and Education
HIST 4245	Heritage Tourism
HIST/ENGL/ WGST 4306	Survey of Feminist Thought
HIST 4308	Crime, Policing, and Justice in American History
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation
HIST 4475	The Vietnam War
HIST 4491	United States History, 1865-1919
HIST 4492	United States History, 1919-1945
HIST 4493	United States History, 1945-1973
HIST 4494	Red and Blue America: U.S. History, 1973-Present
HIST 4504	Animals in U.S. History
HIST 4645	Archival Management
Total Hours	**3**

Europe Distribution

Code	Title	Hours
Complete one of the following Europe distribution courses.		*3*
HIST 1211	Western Civilization I	
HIST 1212	Western Civilization II	
HIST 1400	Controversies in History	
HIST 3121	The World at War, 1914-1945	
HIST 3480	Introduction to European History	
HIST 3481	Ancient Greece	
HIST 3482	Rome: City and Empire	
HIST 3484	British Isles to 1714	
HIST 3485	British Isles Since 1714	
HIST/RLST 3486	Renaissance and Reformation	
HIST 3487	Medieval Europe	
HIST 3488	Tudor-Stuart England	
HIST 3706	Age of Revolution	
HIST 4027	Enlightenment and Revolution	
HIST 4028	Nations and Classes: 19th Century Europe	
HIST 4029	Age of Anxiety in Europe	
HIST 4030	Europe During the World Wars	
HIST 4031	Contemporary Europe	
HIST 4034	Core Themes in European History	
HIST 4035	Crisis and Transformation: Europe's 20th Century	
HIST 4046	Victorians and Victorianism	
HIST 4051	Britain and The Empire	
HIST 4062	Modern France, 1789 to the Present	
HIST 4071	Modern Germany	
HIST 4074	Post-War Germany	
HIST 4083	Russia Since 1917	
HIST/WGST 4303	Sex and Gender in Modern Britain	
HIST/ENGL/ WGST 4306	Survey of Feminist Thought	
HIST/WGST 4307	History of Sexuality	
HIST 4347	History of Biology	
HIST 4348	Mind and Malady: A History of Mental Illness	
HIST 4471	The Second World War	
HIST 4621	Explorers and Exploration	
Total Hours		**3**

World Distribution

Code	Title	Hours
Complete one of the following World distribution courses.		*3*
HIST 1016	World History to 1500	
HIST 1026	World History Since 1500	
HIST 3121	The World at War, 1914-1945	
HIST/ETST 3350	Colonial Latin America	
HIST 3364	Native Americans and Spaniards in North America	
HIST 3451	Introduction to African History	
HIST 3460	Modern Latin American History	
HIST 3469	Intro to East Asia: To 1800	
HIST 3470	Intro to East Asia: Since 1800	
HIST 3500	African History in Novels and Films	
HIST 3606	Science, Technology, and Society in the Modern World	
HIST 3616	Global History of Energy	
HIST 4032	Globalization in World History Since 1945	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
HIST 4075	Travel Stories and Origins of Cultural Anthropology	
HIST 4076	History of Modern Science	
HIST/ETST 4411	Modern Mexico	
HIST 4412	Mexico and the United States: People and Politics on the Border	
HIST 4414	Nationalism and State Building in Latin America, 1750-1850	
HIST 4415	Social Revolutions in Latin America	
HIST 4416	The Age of Imperialism	
HIST 4417	Commodities and Globalization	
HIST 4418	Trade and Premodern World History	
HIST 4420	Traditional China: China to 1600	
HIST 4421	Modern China	
HIST 4422	Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76	
HIST 4431	Modern Japan	
HIST 4451	Southern Africa	
HIST 4455	African Struggle for Independence	
HIST 4461	The Modern Middle East	
HIST/RLST 4462	Islam in Modern History	

HIST 4490	Weapons of Mass Destruction	
HIST 4503	Topics in History of Science	
HIST 4621	Explorers and Exploration	
HIST 4622	Oceans In History	
Total Hours		**3**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/history/minor-history/).

Immigration Studies Undergraduate Certificate

Introduction

Please click here (p. 559) to see History department information.

Issues of immigration are at the center of modern policy and political debates and are thus a core concern for social scientists, policy makers, civic leaders, community organizations, and citizens. The objective of the History Department's Undergraduate Immigration Studies Certificate is to offer both traditional academic training through coursework and research and also practical experience working with immigrant and refugee communities through an internship. The Immigration Studies Certificate will ultimately prepare students to conduct immigration research, influence immigration public policy, and inform immigrant-related government decisions.

Upon successful completion of the certificate, students will:

- Understand the theoretical explanations for immigration flows, immigrant assimilation and exclusion, and ethnic formation
- Possess a fundamental understanding of the legal and political institutions responsible for immigration policy
- Be familiar with currents trends in immigration studies thought, research, and activism
- Be able to apply the content and methodological skills to engage in original research projects involving immigration topics
- Be able to apply the theories and examples from coursework to conduct immigration-focused internships in the workforce

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- Eligibility: While housed in the History Department, Immigration Studies is a multidisciplinary field that draws from Ethnic Studies, Anthropology, Political Science, Education, and Sociology. Thus, CU Denver undergraduate students in any discipline can enroll in the program.
- This certificate is open to all CU Denver Undergraduates. Students may apply for the Immigration Studies Certificate at any point in their studies and maintain a grade point average of at least 3.0 within the certificate courses. To apply, students should print and attach a completed Immigration Studies Certificate Application (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/history/immigration-studies-certificate/immigration_studies_certificate_application.docx) to an unofficial transcript. These documents should be submitted to the Immigration Studies Certificate Administrator, Dr. Kariann Yokota (kariann.yokota@ucdenver.edu). Once the application is approved, students will be contacted about their acceptance into the program.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Immigration Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses.
2. Students must complete a minimum of six upper division (3000-level and above) credit hours from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all certificate credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. If departments offer additional courses that fit within the themes of the Immigration Studies Certificate, those courses can be counted for credit with the Immigration Certificate Administrator's approval
2. The certificate will be awarded when the student graduates with the bachelor's degree.

Required Courses

Code	Title	Hours
Complete both of the following required courses:		*6*
HIST 3345	Immigration and Ethnicity in American History [1]	3
HIST 3939	Internship [2]	1-3

[1] Students must take HIST 3345 Immigration and Ethnicity in American History **prior** to enrolling in an internship.

[2] Students will work with the Immigration Studies Certificate Administrator and the Experiential Learning Center to secure an immigration- or refugee-related Internship.

Electives

Code	Title	Hours
Complete two related electives from the following list of courses:		*6*
ANTH 4300	Migrant Health	
ANTH 4350	Anthropology of Globalization	
EDFN 3000	Undocumented Mexican Immigration	
ETST 3108	Chicano/a and Latino/a History	
ETST 3297	Social History of Asian Americans	
ETST 3697	Contemporary Asian American Experience	
ETST 3704	Culture, Racism and Alienation	
HIST 4412	Mexico and the United States: People and Politics on the Border	
PSCI 4545	Immigration Politics	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/history/immigration-studies-certificate/).

Latin American Studies Undergraduate Certificate

Introduction

Please click here (p. 559) to see History department information.

This country is deeply connected to Latin America in a myriad of ways, and a good part of its history is rooted in Latin American experience. Peoples originating in cultures that we now define as 'Latin America' resided in what is now the US - and in the place we now call Colorado -long before the country came into existence and, in all their diversity, peoples with ties to the region have been co-constructors of the nation ever since. To further our collective understanding of the hemisphere we inhabit, then, it is essential to support the study of the cultural, political, economic, and historical richness of this region. This certificate focuses on societies from Mexico to Patagonia. It makes the case that the study of Latin American lives in all their diversity, both past and present, has much to offer students in their efforts to comprehend the world and their own communities. This certificate will cater to students who wish to examine the histories, arts, literatures, philosophies, politics, and communications of this dynamic region, and it does so by offering a pathway to study Latin America through a bilingual lens as well.

Upon successful completion of the certificate, students will be able to:

1. Recognize the diverse societies, cultures, polities, discourses, and histories that have come to constitute present-day Latin America,
2. Connect Latin American societies to global processes,
3. Compare different methodological and disciplinary approaches that are used to study Latin America,
4. Identify the contributions of Latin American peoples to the construction of the Western Hemisphere and to global society.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- Eligibility: While housed in the History Department, Latin American Studies is a multidisciplinary field that draws from Geography, Spanish, Philosophy, Ethnic Studies, Anthropology, Political Science, and Education. Thus, CU Denver undergraduate students in any discipline are encouraged enroll in the program.
- This certificate is open to all CU Denver Undergraduates. Students may apply for the Latin American Studies Certificate at any point in their studies. To apply, students should contact Dr. Ryan Crewe [ryan.crewe@ucdenver.edu] and indicate their student ID number, their major(s), and expected graduation.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with the Latin American Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses.
2. Students must complete a minimum of six upper division (3000-level and above) credit hours from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all certificate credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The Latin American Studies Certificate advisor can approve additional courses that fit within the themes of the certificate.
2. The certificate will be awarded when the student graduates with the bachelor's degree.

Code	Title	Hours
Complete one of the following Latin American Studies foundations courses:		*3*
HIST/ETST 3350	Colonial Latin America	
HIST 3460	Modern Latin American History	
SPAN 3213	Contemporary Latin American Culture and Institutions	
Complete another foundations course from the list above or one of the following Latin American Studies elective courses:		*3*
GEOG 3130	Central America and the Caribbean	
GEOG 3140	Geography of South America	
PHIL 4341	Latin American Philosophy	
Complete two additional courses from the lists above or two of the following elective courses, depending on your interests and desired focus in Latin American studies: [1]		*6*
ANTH 4320	Archaeology of Mexico and Central America	
COMM/ETST 4722	Communicating Latinx Cultures	
EDFN 3000	Undocumented Mexican Immigration	
ETST 3110	Indigenous Studies	
ETST 3129	Contemporary Latin American Literature	
ETST 3155	The African Diaspora	
FINE 4630	History of Latin American Art:1520-1820	
HIST/ETST 4411	Modern Mexico	
HIST 4412	Mexico and the United States: People and Politics on the Border	
HIST 4415	Social Revolutions in Latin America	
HIST 4621	Explorers and Exploration	
PSCI/ETST 4146	Indigenous Politics	
PSCI 4446	Advanced Indigenous Peoples' Politics	

SPAN 3212	Spanish American Culture and Civilization
SPAN 3225	Special Topics In Hispanic Culture
SPAN 3230	Ibero-American Cultures through Film
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture
SPAN 4060	Dialects of the Spanish-Speaking World
SPAN 4411	Contemporary Spanish-American Novel
SPAN 4450	Masterpieces of Spanish-American Literature
SPAN 4501	Borges: An Introduction to His Labyrinths
SPAN 4512	Contemporary Argentine Short Stories
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial
SPAN 4522	Mexican Literature II: 19th to 21st Centuries
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema
SPAN 4550	Garcia Marquez: Words of Magic
SPAN 4590	Ibero-American Thought
SPAN 4599	Special Topics: Latin American Literature
Total Hours	**12**

[1] Students may complete any of the "required" courses as electives. Each course will only fulfill one category.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/history/programs/).

Humanities

Director: Margaret L. Woodhull, PhD
Program Assistant: Angela Beale
Office: Student Commons 3203
Telephone: 303-315-3565
Fax: 303-315-3569
E-mail: masterhs@ucdenver.edu
Website: clas.ucdenver.edu/ict/index.html (http://clas.ucdenver.edu/ict/)

Overview

The Humanities Minor is an interdisciplinary studies program. Students take courses in a range of disciplines with a variety of faculty.

Undergraduate Information

The Humanities Minor is a 15-credit hour undergraduate interdisciplinary minor available through CU-Denver's College of Liberal Arts and Sciences (CLAS). The study of Humanities offers students ideas and concepts for being ethical, creative citizens equipped with tools for critical thinking in a global, multinational world. Taking an interdisciplinary approach, the Humanities Minor cultivates humanistic concepts through historically grounded texts and traditions. It teaches critical engagement with society's most pressing issues by developing a human-oriented perspective in which creativity and critical, theoretical thinking frame ethical being in the world. Comprising Humanities-based coursework, students gain important foundations in personal and community values by pursuing a concentration in one of three interdisciplinary pathways:

Story-telling and Meaning: comprised of Humanities electives focused on how humans make ethical decisions and meaning in life through literature, philosophy, history, and religion.

Picturing Humanity: comprising Humanities courses emphasizing the aesthetic role of art, history, film, and visual studies in the constitution of diverse cultural and social perspectives.

Theorizing Humanity: comprised of coursework focusing on the public role of social theory, philosophy, ethnic studies, and social justice in the formation of culture and society

Student Learning Goals

A Humanities Minor offers valuable skills demanded by today's competitive global market. Students who study Humanities have strong writing and communication skills that make them successful in a wide range of careers, like teaching, non-profits leadership, advertising, law, and medicine. Humanities Minor pathways tailor coursework within humanistic traditions and ideas that offer meaningful exploration of issues in contemporary life and society. Students learn analytic thinking and reasoning demanded by careers, like law, technology, marketing, and politics. Humanities study provides knowledge that transcends the limitations of individual disciplinary majors and minors. Pathways within the interdisciplinary Humanities Minor offer students the opportunity to bring together content and themes from diverse, but related disciplines within the framework of humanistic inquiry and critical analysis.

Click here (p. 586) to learn about the requirements for the Humanities Minor.

Programs

- Humanities Minor (p. 586)

Humanities (HUMN)

HUMN 1012 - The Humanistic Tradition: Modes of Expression (3 Credits)
Familiarizes students with humanistic modes of expression through the study of history, literature, philosophy, music, and the visual and dramatic arts. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HUMN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

HUMN 4251 - Introduction to Legal Studies (3 Credits)
A survey of the United States legal system, including lawmaking powers, jurisdiction, court procedures, professional ethics and major principles of business law, contracts, estates and probate, family law, property and torts. Cross-listed with HUMN 5251/SSCI 4251/SSCI 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HUMN 4325 - First Amendment: Theory and Context (3 Credits)
First Amendment jurisprudence including free speech/responsibility, sedition/seditious libel/dissent, prior restraints, time/place/manner restrictions, hate/intimidating speech, defamation, privacy/security tensions, intellectual property/public good, advertising, corporate speech, sexual expression, and public status of religion. Cross-listed with HUMN 5325, SSCI 4325, SSCI 5325, PSCI 4325 and PSCI 5325. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HUMN 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with SJUS 4770, SSCI 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HUMN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

HUMN 4984 - Topics: Interdisciplinary Humanities (1-3 Credits)
Concerned with specialized aspects of the humanities from various theoretical and research perspectives. These courses are interdisciplinary and serve as a forum for discussion of individual projects and theses.
Term offered: fall, spring. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

Humanities Minor

Introduction

Please click here (p. 584) to see Humanities department information.

The Humanities Minor cultivates humanistic exploration through historically grounded texts and traditions. It teaches critical engagement with society's most pressing issues by developing a human-oriented perspective in which creativity and critical, theoretical thinking frame ethical being in the world.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours from approved coursework.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours from approved coursework.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of 12 credit hours of approved courses with CU Denver faculty.

Program Allowances and Restrictions

1. Coursework must be approved by a Humanities Minor advisor.
2. Of the four elective courses, at least one course must be taken at 3000-level and at least one must be at the 4000-level.
3. If a student wants to deviate from these lists, they must have advisor approval prior to completing the substitute coursework.

Code	Title	Hours
Complete the following introductory course		*3*
HUMN 1012	The Humanistic Tradition: Modes of Expression [1]	
Complete 12 elective credit hours in Humanities and Humanities-related disciplines. Choose coursework from any of these interdisciplinary pathways:		*12*
A minimum of one elective course must be taken at 3000-level and a minimum of one must be at the 4000-level.		
Picturing Humanity (p. 586)		
Story-telling and Meaning (p. 586)		
Theorizing Humanity (p. 587)		
Total Hours		**15**

[1] Students may opt to complete or transfer in a comparable HUMN 1000- or 2000-level course with prior advisor approval.

Picturing Humanity

Code	Title	Hours
Comprising Humanities courses emphasizing the aesthetic role of art, history, film, and visual studies in the constitution of diverse cultural and social perspectives.		
ENGL 2250	Introduction to Film	
ENGL/HIST 3070	Studies in Film History (may be repeated with a different topic)	
ENGL 3200	From Literature to Film	
ETST 3036	American Indian Cultural Images	
FINE 2600	Art History Survey I	
FINE 4630	History of Latin American Art:1520-1820	
FINE 4670	Greek and Roman Art	
FINE 4680	Art of the Medieval Multiverse	
FINE 4700	Italian Renaissance Art	
FINE 4750	Arts of China	
FINE 4990	Contemporary Art: 1960 to Present	
FINE 5610	Pre-Columbian Art	
HIST 4228	Western Art and Architecture	
HIST 4231	History in Museums	
HIST 4232	Historic Preservation	
PHIL 1700	Philosophy and the Arts	
PHIL 4220	Art, Beauty, and Aesthetic Criticism: Philosophy of Art	

Story-Telling and Meaning

Code	Title	Hours
Comprised of Humanities electives focused on how humans make ethical decisions and meaning in life through literature, philosophy, history, and religion.		
ENGL/HIST 3070	Studies in Film History (may be repeated with a different topic)	
ENGL 3075	Film Genres	
ENGL 4236	The American Short Story	
ENGL 4510/ RLST 4730/ WGST 4510	Whores and Saints: Medieval Women	
HUMN 4984	Topics: Interdisciplinary Humanities (may be repeated with a different topic)	
PHIL 3280	War and Morality	
PHIL/RLST 3410	Asian Philosophies and Religions	
PHIL 3550	Philosophy of Death and Dying	
PHIL 4270	Philosophy of History	

PHIL 4470/ RLST 4440	Concepts of the Soul
PHIL/RLST 4480	Perspectives on Good and Evil
PHIL 4600/ RLST 4060	Questioning Religious Belief and Practice: Introduction to Philosophy of Religion
PHIL/WGST 4933	Philosophy of Eros
RLST 4340	The Hero's Journey
RLST 4460	Death and Concepts of Afterlife

Theorizing Humanity

Code	Title	Hours
Comprised of coursework focusing on the public role of social theory, philosophy, ethnic studies, and social justice in the formation of culture and society.		
ETST 2024	Race and Ethnic Relations	
ETST 3211	Hip Hop Music & Culture	
ETST 3704	Culture, Racism and Alienation	
HIST 3121	The World at War, 1914-1945	
HIST 3230	The American Presidency	
HIST/COMM 3231	Famous U.S. Trials	
HIST 3235	U.S. Labor History, 1800 to the Present	
HIST 3347	African-American History, 1619-Present	
HIST 3364	Native Americans and Spaniards in North America	
HIST 3366	Nature and Power in American History	
HIST 3601	Colorado History	
HIST 4027	Enlightenment and Revolution	
HIST 4028	Nations and Classes: 19th Century Europe	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
HIST 4076	History of Modern Science	
HUMN/SSCI 4251	Introduction to Legal Studies	
HUMN 4984	Topics: Interdisciplinary Humanities (may be repeated with a different topic)	
SJUS 2000	Foundations in Social Justice	
SJUS 2010	Social Justice: Theories, Narratives, and Technologies	

To learn more about the Student Learning Outcomes for this program, please visit our website. (https://clas.ucdenver.edu/mhmss/humanities-minor/)

Individually Designed Major

Director: Associate Dean Marjorie Levine-Clark
Faculty advisor: Brandon Mills

Overview

The Individually Designed Major (IDM) allows students to be creative with their educational experiences by going beyond the boundaries of traditional disciplines. Students can choose from two different options that best suit their needs. The Interdisciplinary Studies Option allows students to combine coursework from two, three, or even more academic units to explore a particular theme. Students who pursue Interdisciplinary Studies tend to have a focused interest they seek to investigate. The Integrated Health Studies Option is designed for students who are interested in health from the perspective of the liberal arts and sciences and who seek interdisciplinary training focused around particular health topics. The IDM provides students with the opportunity to explore their academic interests with intention and imagination.

Honors

Liberal arts students interested in graduating with Latin honors in the Individually Designed Major program should confirm with their CLAS advisor and IDM Faculty Advisor that they meet eligibility requirements. Students who successfully complete the IDM honors program will have the appropriate Latin honor designation placed on the University of Colorado diploma and transcript.

- To participate in the IDM honors program, CLAS students must meet each of the following eligibility requirements:
  - have a declared IDM major with an approved option and course contract
  - possess a minimum 3.2 cumulative University of Colorado GPA
  - possess a minimum 3.5 GPA on all completed University of Colorado course work in the IDM contract
- Eligible IDM students must complete submit their capstone research project to the IDM Faculty Advisor. The level of Latin honors awarded is determined by the IDM Faculty in consultation with other relevant faculty. Upon submission of the written research project report to the honors committee, the level of Latin honors will be determined by the following criteria:
  - cum laude-awarded upon completion of project report
  - magna cum laude-awarded by honors committee based on successful project report
  - summa cum laude-awarded by honors committee based on excellence in project report

Interdisciplinary Studies Option Course Contracts:

In order to declare the Interdisciplinary Studies Option, students are required to submit a course contract. Interdisciplinary Studies students must also submit a proposal form which describes the major they propose to design. Copies of completed Interdisciplinary Studies course contracts must be filed with the Individually Designed Major Faculty Advisor and with your CLAS Academic Advisor.

- The Interdisciplinary Studies course contract must include:
  - A list of the courses in your chosen clusters as well as potential alternate courses. You should work closely with the Individually Designed Major Faculty Advisor and faculty advisors in your chosen clusters to create your course contract.
  - Signatures from your Individually Designed Major Faculty Advisor, from any Faculty Advisors from minors used in your contract, and from your CLAS Academic Advisor.
- The Interdisciplinary Studies proposal form must include:
  - a name for the theme of your major.
  - a 400-word description of the major you propose to construct.
  - a description of the major theme which explains the disciplinary or interdisciplinary clusters you will be including in your course of study, how they relate to each other, and how they form a coherent body of knowledge.
  - approval from your Individually Designed Major Faculty Advisor.
- ***Integrated Health Studies does not require a proposal form or course contract.***

Programs

Individually Structured Major Options

- Integrated Health Studies Option, BA - Individually Designed Major (p. 590)
- Interdisciplinary Studies, BA - Individually Designed Major (p. 593)

Individually Designed Major (IDMA)

IDMA 1500 - Introduction to Interdisciplinary Learning (3 Credits)
This course introduces the theories, methodologies, and practices of interdisciplinary studies through a specific theme that will focus on how to learn in an online environment and how interdisciplinary scholars combine the theories and methods of a variety of fields. Students who have earned credit for ISMA 1500 will not earn credit for IDMA 1500. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

IDMA 2840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 2840 will not earn credit for IDMA 2840. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

IDMA 3000 - Special Topics (1-3 Credits)
Special classes for faculty-directed experiences examining issues and problems not generally covered in the curriculum. Students who have earned credit for ISMA 3000 will not earn credit for IDMA 3000. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

IDMA 3100 - Learning Across Disciplines (3 Credits)
Examining a compelling issue, students will learn what kinds of questions require thinking beyond a single discipline, how interdisciplinary scholars combine a variety of fields, and how to approach the challenges of interdisciplinary writing. Students who have earned credit for ISMA 3100 will not earn credit for IDMA 3100.Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IDMA 3500 - Interdisciplinary Experiential Learning (3 Credits)
In this course, students will the knowledge from their chosen clusters to bear on an experiential opportunity. Choosing an internship, community-based project, or job extension, students will collaborate with peers to design projects in this highly student-driven course. Prereq: IDMA 1500 with a C- or higher. Students who have earned credit for ISMA 3500 will not earn credit for IDMA 3500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: IDMA 1500 with a C- or higher

IDMA 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 3840 will not earn credit for IDMA 3840. Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

IDMA 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Students who have earned credit for ISMA 3939 will not earn credit for IDMA 3939. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

IDMA 4500 - Interdisciplinary Learning Capstone (3 Credits)
This course brings together students who have been working on individualized majors to share a capstone experience. The goal is for students to integrate knowledge from their cluster and apply it to a project relevant to their field of interest. Prereq: IDMA 3500 with a C- or higher. Students who have earned credit for ISMA 4500 will not earn credit for IDMA 4500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: IDMA 3500 with a C- or higher.

IDMA 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 4840 will not earn credit for IDMA 4840. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

IDMA 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 4880 will not earn credit for IDMA 4880. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

IDMA 4900 - Interdisciplinary Studies Capstone (3 Credits)
Students will be guided through the research process as they complete interdisciplinary capstone projects. They will receive feedback during each stage of the project's development and consultation from discipline specific faculty advisors. Prereq: COMM 2500 or HEHM 3100 or IDMA 3100 or PBHL 2001 or SOCY 3440 with a C- or higher. Students who have earned credit for ISMA 4900 will not earn credit for IDMA 4900. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2500 or HEHM 3100 or IDMA 3100 or PBHL 2001 or SOCY 3440 with a C- or higher.

Integrated Health Studies Option, BA - Individually Designed Major

Introduction

Please click here (p. 588) to see Individually Designed Major department information.

The College of Liberal Arts and Sciences (CLAS) Integrated Health Studies Option provides students with the opportunity to design an individualized major that meets their unique needs, and which results in a B.A.

Integrated Health Studies is designed for students who are interested in health from the perspective of the liberal arts and sciences and who seek interdisciplinary training focused around particular health topics. An interdisciplinary approach to health through the liberal arts and sciences seeks to create broadly-educated citizens who can apply critical thinking, information literacy, analysis, and independent problem solving to a wide variety of situations. Students can choose from a selection of health-focused minors and certificates that they combine with interdisciplinary clusters, which permits deeper understanding of a focused health topic. The track supports students seeking positions in:

- Health education
- Health administration
- Community health
- Non-profit health organizations
- Environmental health
- Community organizing
- Social work
- Occupational health
- Health policy
- Gerontology
- And more

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individually designed requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

The IDM program plan must comply with the following policies:

1. Students must complete a minimum of 39 credit hours from the approved courses.
2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours in the approved cluster area and must complete all of the upper-division requirements for the minor or certificate they choose to pair with the cluster.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 credit hours with CU Denver faculty from the approved cluster area and must complete all of the residency requirements for the minor or certificate they choose to pair with the cluster.

Program Restrictions, Allowances and Recommendations

1. Students combine **one** of the identified CLAS minors or certificates with **one** of the topical clusters to make up their **major areas**. Students will earn the minor/ certificate they use to form a cluster for their major, as long as they have completed all of the requirements for that program.
2. Students can double-count a maximum of one course across their areas (in addition to an introductory course).
3. Students must take courses from at least **two** different disciplines in their topical cluster.
4. Students are required to take **two** courses as an introduction to their major. If an introductory course is also part of a student's topical cluster, a student may count one introductory course as part of that area's credits.
5. **Note**: Some courses in each cluster require prerequisites that must be met making them a 21 credit cluster. Please see course descriptions.

Code	Title	Hours
Complete the following program requirements:		**39**
Complete two of the following courses: [1]		*6*
COMM 2500	Introduction to Health Communication	
HEHM 3100	Introduction to Health Humanities	
PBHL 2001	Introduction to Public Health	
SOCY 3440	Medical Sociology	
Complete one approved CLAS minor or certificate:		*15*
Public Health Minor (p. 591)		
Health Humanities Minor (p. 591)		
Health Communication Undergraduate Certificate (p. 591)		
Community Health and Medicine Undergraduate Certificate (p. 591)		
Complete a minimum of 15 credit hours, with nine at the upper division level, in at least one approved topical cluster:		*15*

Aging and End of Life Cluster (p. 591)	
Biology and Society Cluster (p. 591)	
Environmental Health Cluster (p. 591)	
Drugs and Addiction Cluster (p. 592)	
Family Health Issues Cluster (p. 592)	
Food and Nutrition Cluster (p. 592)	
Sexuality and Reproduction Cluster (p. 592)	
Complete the Interdisciplinary Studies Capstone Course. [2]	*3*
IDMA 4900 Interdisciplinary Studies Capstone	

1 If an introductory course is also part of a student's chosen area, a student may count one introductory course as part of that area's credits.

2 Taken toward the end of your career (junior/senior year.)

Public Health Minor (p. 553)

The undergraduate minor in Public Health is designed to provide students with a basic understanding of the social, cultural, and biological dimensions of health. The minor curriculum provides students with the intellectual and methodological tools needed to understand the joint bio-cultural determinants and contexts of health, health care and public health.

Health Humanities Minor (p. 557)

The Health Humanities minor critically analyzes historical and contemporary connections among health, medicine, and society. The minor deepens understandings of disease and wellness, pain and suffering, personhood, the nature of death and dying, embodied experience, and the limits of technological knowledge. Students explore the human dimensions of medical practice and how they interact with lived experience.

Health Communication Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/communication/health-communication-certificate/)

The Health Communication Undergraduate Certificate seeks to impart the knowledge and skills necessary for creating, analyzing, and assessing health communications in a diverse and global world, where health occupies an increasingly prominent portion of our public life. This certificate provides students with a theoretically rich and practically relevant education in how health messages are generated, negotiated, and understood.

Community Health and Medicine Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/sociology/sociology-health-medicine-certificate/)

The Community Health and Medicine Undergraduate Certificate provides training in the core research methodologies and theories of medical sociology, examining individual experience, institutional structures, laws and policies that affect health, and broader systems of inequality that lead to unequal rates of illness and access to care.

Aging and End of Life Cluster

The Aging and End of Life Cluster is designed for students to learn about the range of human experiences with aging and dying, and to understand how the medical considerations of aging and the end of life intersect with social, ethical, policy, and religious questions.

Code	Title	Hours
ANTH 3666	Anthropology of Death	
HDFR 4300	Families in Later Life	
IWKS 4520	Design for Healthful Human Longevity	
PBHL 3091	Live Long and Prosper: Public Health & Aging	
PHIL 3550	Philosophy of Death and Dying	
PSYC 2205	Lifespan Developmental Psychology for Health Majors	
PSYC 3822	Aging, Brain and Behavior	
RLST 4460	Death and Concepts of Afterlife	
SOCY 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4290	Aging, Society and Social Policy	
SOCY 4650	Sociology of Adulthood and Aging	

Biology and Society Cluster

This area examines the ways biology interacts with everyday life. Students will learn about the reciprocal relationships between biology and society, including themes of health and disease, the environment, evolution, ethics, and behavioral choices about health.

Code	Title	Hours
ANTH 4600	Medical Anthropology	
BIOL 3104	Behavioral Genetics	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSYC 2220	Biological Basis of Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
SOCY 4220	Population Change and Analysis	

Note: If students choose multiple upper division PSYC courses, they will need to add the introductory prerequisites, for a total for 21 credits for the cluster.

Environmental Health Cluster

This area focuses on the relationships between people and their environments. Students will learn about how both natural and built environments impact human health and disease, and how ecological balances are important to maintaining human health.

Code	Title	Hours
ANTH 3316	History of Human Environmental Impacts	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 4053	Disease Ecology	
BIOL 4154	Conservation Biology	
BIOL 4415	Applied Microbial Ecology	
BIOL 4460	Environmental Toxicology	
ENVS 1342	Environment, Society and Sustainability	
ENVS 4720	Climate Change: Causes, Impacts and Solutions	

GEOG 3401	Geography of Food and Agriculture
GEOG 3501	Geography of Health
GEOG 4020	Earth Environments and Human Impacts
GEOG 4350	Environment and Society in the American Past
GEOG 4710	Disasters, Climate Change, and Health
PBHL 3020	Introduction to Environmental Health

Note: If students choose multiple upper division BIOL courses, they will need to add the introductory prerequisites, for a total for 21 credits for the cluster.

Drugs and Addiction Cluster

This area considers the characteristics of addiction and how drugs work. Students will have the opportunity to study drugs and addiction from a variety of perspectives to better understand how individuals experience addiction and how society approaches policies and treatments regarding drugs and addiction.

Code	Title	Hours
ANTH 3045	Cannabis Culture	
ANTH/PBHL 4090	Psychedelic Anthropology	
ECON 3400	Economics of Sex and Drugs	
PSYC 3265	Drugs, Brain and Behavior	
SOCY 3040	Drugs, Alcohol & Society	

Family Health Issues Cluster

This area explores families as locations of health and well-being, on the one hand, and sources of health problems and crises, on the other. Students will learn about the relationships between family health and community health, as well as individual health and family health.

Code	Title	Hours
COMM 3275	Family Communication	
HDFR 3400	Love, Couples and Family	
PBHL 3051	Mental Illness and Society	
PBHL 4110	Public Health Perspectives On Family Violence	
PSYC 3405	Family Psychology	
PSYC 3611	Psychology of Women	
SOCY 3010	Sociology of Human Sexuality	
SOCY 3700	Families and Society	
SOCY 4270	Social Meanings of Reproduction	
SOCY 4290	Aging, Society and Social Policy	
SOCY 4640	Sociology of Childhood and Adolescence	
SOCY 4650	Sociology of Adulthood and Aging	
SOCY 4780	Violence in Relationships	

Note: If students choose multiple PSYC courses, they will need to add the introductory prerequisites, for a total for 21 credits for the cluster.

Food and Nutrition Cluster

This area considers relationships between nutrition and overall health and well-being. Students will connect food to issues of sustainability and communication, understand obstacles to healthy eating, and learn about global issues of nutrition.

Code	Title	Hours
CHEM 2300	Nutritional Chemistry	
COMM 4601	You Are What You Eat: Food as Communication	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	
EDFN 4000	Food Justice in City & Schools	

Sexuality and Reproduction Cluster

This area examines sexuality and reproduction at both micro and macro levels, from the anatomy of the human body and the psychology of mind to the history of multiple societies and clusters. Students will learn how assumptions about gender and sex inform the science of sexuality and reproduction, and health impacts that derive from these relationships.

Code	Title	Hours
ANTH 4260	Human Reproductive Ecology	
BIOL 3074	Human Reproductive Biology	
HIST 4307	History of Sexuality	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PBHL 3010	Human Sexuality and Public Health	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PSYC 3235	Human Sexuality	
SOCY 3010	Sociology of Human Sexuality	
SOCY 3080	Sex and Gender	
SOCY 4220	Population Change and Analysis	
SOCY 4270	Social Meanings of Reproduction	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/academic-programs/integrated-health-studies/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Interdisciplinary Studies, BA - Individually Designed Major

Introduction

Please click here (p. 588) to see Individually Designed Major department information.

The College of Liberal Arts and Sciences Interdisciplinary Studies Option provides students with the opportunity to design an individualized major that meets their unique needs and interests, and which results in a B.A. This flexible program allows students to follow academic pursuits that transcend traditional department or college boundaries, combining coursework from two, three, or even more academic units to explore a particular theme. Interdisciplinary Studies tends to be more focused than traditional majors and should not be considered a default major for students uncertain about their course of study.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- In order to declare the Interdisciplinary Studies Option, students are required to submit a course contract. Interdisciplinary Studies students must also submit a proposal form which describes the major they propose to design. Copies of completed Interdisciplinary Studies course contracts must be filed with the Individually Designed Major Faculty Advisor and with your CLAS Academic Advisor.
  - The Interdisciplinary Studies course contract must include:
    - A list of the courses in your chosen clusters as well as potential alternate courses. You should work closely with the Individually Designed Major Faculty Advisor and faculty advisors in your chosen clusters to create your course contract.
    - Signatures from your Individually Designed Major Faculty Advisor, from any Faculty Advisors from minors used in your contract, and from your CLAS Academic Advisor.
  - The Interdisciplinary Studies proposal form must include:
    - a name for the theme of your major.
    - a 400-word description of the major you propose to construct.
    - a description of the major theme which explains the disciplinary or interdisciplinary clusters you will be including in your course of study, how they relate to each other, and how they form a coherent body of knowledge.
    - approval from your Individually Designed Major Faculty Advisor.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Requirements (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

The Interdisciplinary Studies program plan requires course work over two or three disciplinary or interdisciplinary clusters. The Interdisciplinary Studies program plan must comply with the following policies:

1. Students must complete a minimum of 42 credits from approved coursework.
2. Students must complete a minimum of 18 upper division (3000 level and above) credit hours with a minimum of nine upper division level credit hours in Clusters I and II.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. A minimum of nine credits in Clusters I and II, in addition to IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone (24 total credit hours) must be completed with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Once the Interdisciplinary Studies course contract is filed, any changes to coursework must be approved by the student's Individually Designed Major Faculty Advisor
2. A minimum of 30 credit hours must be completed in liberal arts and sciences course work.
3. A maximum of one disciplinary cluster may be outside CLAS.
4. One cluster can be based on a pre-formed thematic cluster with an already-approved group of classes provided by the major on the website.
5. A third optional cluster may be a mixture of course work, excluding courses from the first and second clusters.
6. An Interdisciplinary Studies title must be consistent with the academic theme and clusters in the program plan.
7. Students may petition the IDM Faculty Advisor to fulfill their introduction and capstone outside of IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone .
8. The Interdisciplinary Studies proposal should be approved before students have taken one-third of the classes listed in their course contracts.

Roles and Responsibilities

Student

- creates the Interdisciplinary Studies course contract and proposals in collaboration with the Individually Designed Major Faculty Advisor
- meets regularly with IDM Faculty Advisor to assess progress
- fulfills requirements of Interdisciplinary Studies course contract

IDM Faculty advisor

- approves Interdisciplinary Studies course contract
- approves student proposals for Interdisciplinary Studies
- meets with Interdisciplinary Studies advisees to monitor progress
- maintains records of Interdisciplinary Studies applications
- oversees advisees' capstone projects
- certifies graduation

CLAS Academic Advisor

- reviews overall course contract
- maintains records of Interdisciplinary Studies contracts

Code	Title	Hours
Complete the following program requirements:		**42**
Complete the following required courses:		*6*
IDMA 3100	Learning Across Disciplines [1]	
IDMA 4900	Interdisciplinary Studies Capstone [2]	
Complete a minimum of 15 credit hours in each of two approved interdisciplinary clusters. At least one cluster must be within a single discipline. The second cluster can be drawn from the following approved interdisciplinary thematic clusters.		*36*
Aging and End of Life Cluster (p. 594)		
Art and Visual Culture Cluster (p. 594)		
Biology and Society Cluster (p. 595)		
Cities, Spaces, and Society Cluster (p. 595)		
Drugs and Addiction Cluster (p. 595)		
Food and Nutrition Cluster (p. 595)		
Media Cluster (p. 595)		
Organizations and Leadership Cluster (p. 596)		
Policy and Security Cluster (p. 596)		
Sexuality Cluster (p. 596)		
Violence and Conflict Cluster (p. 596)		
Students can fulfill the remainder of their credit hours by contracting with additional disciplines or by designing their own interdisciplinary clusters by choosing courses from a variety of disciplines that suit their academic goals.		
Up to 15 credit hours of an Interdisciplinary Studies course contract can come from outside of the College of Liberal Arts and Sciences.		

[1] Should be taken early in the academic career (i.e. sophomore year.)
[2] Should be taken toward the end of the academic career (i.e. senior year.)

Age and End of Life Cluster

Code	Title	Hours
ANTH 3666	Anthropology of Death	
IWKS 4520	Design for Healthful Human Longevity	
PHIL 3550	Philosophy of Death and Dying	
PSYC 2205	Lifespan Developmental Psychology for Health Majors	
PSYC 3822	Aging, Brain and Behavior	
RLST 4460	Death and Concepts of Afterlife	
SOCY 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4290	Aging, Society and Social Policy	
SOCY 4650	Sociology of Adulthood and Aging	

Art and Visual Culture Cluster

Code	Title	Hours
COMM 4621	Visual Communication	
ENGL 2250	Introduction to Film	
ENGL 3070	Studies in Film History	
ENGL 3075	Film Genres	
ENGL 3080	Global Cinema	
ENGL 3300	Topics in Film	
ENGL 3301	Topics in Film: Am. Lit	
ENGL 3302	Topics in Film: Before 1650	
ENGL 3303	Topics in Film: 1650-1900	
ENGL 4420	Film Theory and Criticism	
ETST 3036	American Indian Cultural Images	
FITV 1001	Fundamentals of Film and Television	
FITV 1200	The Culture of Television	
FITV 3200	History of Cinematic Arts I	
FITV 3611	Drama of Diversity	
FINE 1001	Introduction to Art	
FINE 1450	Visual Culture: Ways of Seeing	
FINE 2600	Art History Survey I	
FINE 2610	Art History Survey II	
FINE 3520	Sculpture: Contemporary Artists and Concepts	
FINE 3630	History of Photography	
FINE 3636	Through the Lens: Photography and Diversity	
FINE 3640	Topics in Art History I: Art Before Modernism	
FINE 3644	Topics in Art History II: Modern and Contemporary	
FINE 3775	Asian Art, 1850 to Now	
FINE 4523	Topics in Art History I: Art Before Modernism	
FINE 4524	Topics in Art History II: Modern and Contemporary Art	
FINE 4525	Museum Studies	
FINE 4600	History of Modern Design:Industrial Revolution-Present	
FINE 4610	Pre-Columbian Art	
FINE 4620	American Art	
FINE 4630	History of Latin American Art:1520-1820	
FINE 4670	Greek and Roman Art	
FINE 4680	Art of the Medieval Multiverse	
FINE 4700	Italian Renaissance Art	
FINE 4705	Northern Renaissance Art	
FINE 4710	Baroque and Rococo Art	
FINE 4730	Arts of Japan	
FINE 4750	Arts of China	
FINE 4770	Art of India and Southeast Asia	
FINE 4970	Modernist Art	
FINE 4980	Gender in Contemporary Art	
FINE 4990	Contemporary Art: 1960 to Present	
FINE 4993	Topics Seminar in Art History I: Art before Modernism	

FINE 4994	Topics Seminar in Art History II: Modern and Contemporary Art	
GEOG 2080	Introduction to Mapping and Map Analysis	
HIST 3070	Studies in Film History	
HIST 4228	Western Art and Architecture	
HIST 4231	History in Museums	

Biology and Society Cluster

Code	Title	Hours
ANTH 4600	Medical Anthropology	
BIOL 3104	Behavioral Genetics	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSYC 2220	Biological Basis of Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
SOCY 4220	Population Change and Analysis	3

Cities, Spaces, and Society Cluster

Code	Title	Hours
ARCH 1110	Introduction to Architecture	
ARCH 2230	Architectural History I	
ARCH 3230	Architectural History II	
ARCH 3693	Rome: Architecture & Urbanism	
ECON 4318	Urban Economics	
EDFN 4000	Food Justice in City & Schools	
EDHD 1019	Introduction to Urban Education	
ENVS 1342	Environment, Society and Sustainability	
GEOG 1602	Urban Studies and Planning	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4085	GIS Applications for the Urban Environment	
HIST 4225	Urban America	
HIST 3349	Social Movements in 20th Century America	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3482	Rome: City and Empire	
LDAR 4435	Community Engaged Design Practice	
MUSC 3730	Introduction to Music Cities	
PSCI 3914	The Urban Citizen	
PSCI 4075	Gentrification and Social Equity	
PSCI 4124	Denver Politics	
PUAD 4628	Social Problems and Policies in the Urban Environment	
SOCY 3001	Urban Sociology	
SOCY 4590	Crime, Justice, and the City	
URPL 3000	Planning the Built Environment	

Drugs and Addiction Cluster

Code	Title	Hours
ANTH 3045	Cannabis Culture	
ANTH/PBHL 4090	Psychedelic Anthropology	
ECON 3400	Economics of Sex and Drugs	
PSYC 3265	Drugs, Brain and Behavior	
SOCY 3040	Drugs, Alcohol & Society	

Food and Nutrition Cluster

Code	Title	Hours
CHEM 2300	Nutritional Chemistry	
COMM 4601	You Are What You Eat: Food as Communication	
EDFN 4000	Food Justice in City & Schools	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	

Media Cluster

Code	Title	Hours
COMM 1021	Introduction to Media Studies	
COMM 2051	Introduction to Strategic Communication	
COMM 2071	Media Writing Skills	
COMM 3650	Media and Society	
COMM 3660	Social Media for Social Change	
COMM 4051	Advanced Strategic Communication	
COMM 4610	Communication, Media, and Sex	
COMM 4621	Visual Communication	
COMM 4660	Queer Media Studies	
COMM 4665	Principles of Advertising	
CRJU 3251	Crime and the Media	
CSCI 4920	Computer Game Design and Programming	
DACD 3820	Animation 1: Introduction to Animation and Rigging	
ENGL 1601	Storytelling: Literature, Film, and Television	
ENGL 2250	Introduction to Film	
ENGL 3075	Film Genres	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3106	Writing for Print Media	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
ENGL 4420	Film Theory and Criticism	
ENGR 3400	Technology and Culture	
ENGR 3600	International Dimensions of Technology and Culture	
ETST 3036	American Indian Cultural Images	
ETST 3272	Global Media	
FINE 3424	Interactive Media	
INTE 4300	Critical Digital Literacies	
INTE 4340	Learning with Digital Stories	
INTE 4665	Learning with Social Media and Networking	
ISMG 3000	Technology In Business	

PHIL 4920	Philosophy of Media and Technology
PSCI 4014	Media and Politics
WGST 3020	Gender, Sexuality and Race in American Popular Culture

Organizations and Leadership Cluster

Code	Title	Hours
BLAW 3050	Business Law and Ethics	
COMM 2045	Workplace Communication	
COMM 2051	Introduction to Strategic Communication	
COMM 4111	Theories of Leadership	
COMM 4240	Organizational Communication	
COMM 4255	Negotiations and Bargaining	
COMM 4260	Communication and Conflict	
ECON 4740	Industrial Organization	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENTP 3210	Visionary Leadership for New Ventures	
ETST 4165	Cultural Diversity Awareness in the Workplace	
HDFR 4003	Leadership and Organizations	
MGMT 3000	Managing Individuals and Teams	
MGMT 3010	Managing People for a Competitive Advantage	
MGMT 4370	Organization Design	
PHIL 3250	Business, Society, and Moral Responsibility	
PSYC 3145	Industrial and Organizational Psychology	
PUAD 1001	Why You Should Care About Government: Public Service and Administration	
PUAD 2001	Management for Public Service	
PUAD 3002	Organizational and Strategic Management	
PUAD 3003	Introduction to Nonprofit Organizations	
PUAD 3004	Managing Nonprofit Organizations	
PUAD 3005	Collaboration Across Sectors	
PUAD 4000	Human Resources and Ethics in Public Service	
PUAD 4002	Leading and Engaging for the Public Good	
PUAD 4009	Human Service Organizations	

Policy and Security Cluster

Code	Title	Hours
COMM 4430	Communication, China, and the US	
COMM 4611	Rhetoric of Global Food Policy	
COMM 4682	Political Communication	
COMM 4720	Dynamics of Global Communication	
CRJU 4450	Homeland Security	
ENVS 1342	Environment, Society and Sustainability	
GEOG 4380	Anthropocene Futures	
GEOG 4440	Science, Policy and the Environment	
HIST 3121	The World at War, 1914-1945	
HIST 3345	Immigration and Ethnicity in American History	
HIST 4032	Globalization in World History Since 1945	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation	
HIST 4475	The Vietnam War	
HIST 4490	Weapons of Mass Destruction	
PHIL 3280	War and Morality	
PSCI 4146	Indigenous Politics	
PSCI 4216	International Politics: Human Rights	
PSCI 4237	American National Security	
PSCI 4240	International Security	
PSCI 4280	The Politics of War Law	
PSCI 4354	Environmental Politics	
PSCI 4365	Global Ecological Crises	
PSCI 4545	Immigration Politics	
PSCI 4807	Political Violence	
PUAD 4010	Public Service in Emergency Management and Homeland Security	

Sexuality Cluster

Code	Title	Hours
BIOL 3074	Human Reproductive Biology	
COMM 4610	Communication, Media, and Sex	
COMM 4660	Queer Media Studies	
ECON 3400	Economics of Sex and Drugs	
ENGL 4306	Survey of Feminist Thought	
ENGL 4308	Contemporary Feminist Thought	
ENGL 4510	Whores and Saints: Medieval Women	
ETST 4305	Women of Color Feminisms	
HIST 3343	Women & Gender in US History	
HIST 4303	Sex and Gender in Modern Britain	
HIST 4307	History of Sexuality	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PBHL 3010	Human Sexuality and Public Health	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PBHL 4200	The Global HIV/AIDS Epidemic	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 4500	Feminist Philosophy	
PHIL 4933	Philosophy of Eros	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4564	Gender and Politics	
PSCI 4827	Women and the Law	
PSYC 3235	Human Sexuality	
PSYC 3263	Hormones and Behavior	
PSYC 3611	Psychology of Women	
SOCY 2440	Deviance and Social Control	
SOCY 3010	Sociology of Human Sexuality	
SOCY 3080	Sex and Gender	
SOCY 4270	Social Meanings of Reproduction	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

Violence and Conflict Cluster

Code	Title	Hours
HIST 3121	The World at War, 1914-1945	
HIST 3706	Age of Revolution	

HIST 4030	Europe During the World Wars
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.
HIST 4212	Civil War and Reconstruction
HIST 4220	U.S. Foreign Policy Since 1912
HIST 4415	Social Revolutions in Latin America
HIST 4416	The Age of Imperialism
HIST 4471	The Second World War
HIST 4475	The Vietnam War
HIST 4490	Weapons of Mass Destruction
PHIL 3280	War and Morality
PHIL 4450	Punishment and Social Justice
PSCI 4276	Conflicts and Rights in International Law
PSCI 4280	The Politics of War Law
PSCI 4286	International Relations: War or Peace?
PSCI 4807	Political Violence
PSCI 4878	War, Film, and International Law
SOCY 4460	Hate Groups and Group Violence
SPAN 4360	Women and the Spanish Civil War

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/academic-programs/interdisciplinary-studies-major/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Integrated Studies

Director: Associate Dean Marjorie Levine-Clark
Faculty advisor: Brandon Mills

Overview

The Integrated Studies major allows students to be creative with their educational experiences by going beyond the boundaries of traditional disciplines and awarding a BA or a BS, depending on the the courses that students take.

With this major, students will gain the foundation of a liberal arts education that includes critical thinking, effective communication, cultural diversity, data analysis, quantitative and digital literacy, integration of information and ideas across different contexts, and problem solving. They also will learn to tackle complex issues from several perspectives.

For example, a student may create a cluster focused on climate change by selecting courses from environmental science, economics, statistics, and history and then pair the cluster with a minor in Geography for the B.A. The B.S. would require the student to substitute a minor in Statistics or Computer Science for the minor in Geography. Another example for either the B.A. or B.S. would be data analysis as it pertains to a specific discipline. The capstone project will cement their skills in recognizing a problem, formulating a holistic methodology to address the fundamental issues, and devising solutions from multiple approaches.

Having students design their degrees will leverage their knowledge, inspire confidence and resilience, empower their decisions, and generate deeper participation in their learning processes. As stated above, the goal is to provide maximum flexibility and multiple pathways through the curriculum tailored to each individual such that, when they return to school, they can switch gears if necessary, re-engage, and complete their degrees.

Honors

Liberal arts students interested in graduating with Latin honors in the Integrated Studies Major program should confirm with their CLAS advisor and Integrated Studies Faculty Advisor that they meet eligibility requirements. Students who successfully complete the \ honors program will have the appropriate Latin honor designation placed on the University of Colorado diploma and transcript.

To participate in the honors program, CLAS students must meet each of the following eligibility requirements:

- have a declared Integrated Studies major
- possess a minimum 3.2 cumulative University of Colorado GPA
- possess a minimum 3.5 GPA on all completed University of Colorado coursework that applies to the major requirements

Eligible students must complete submit their capstone research project to the Integrated Studies Faculty Advisor. The level of Latin honors awarded is determined by the Integrated Studies Faculty Advisor in consultation with other relevant faculty. Upon submission of the written research project report to the honors committee, the level of Latin honors will be determined by the following criteria:

- cum laude-awarded upon completion of project report
- magna cum laude-awarded by honors committee based on successful project report
- summa cum laude-awarded by honors committee based on excellence in project report

Programs

- Integrated Studies, BA (p. 599)
- Integrated Studies, BS (p. 604)

Integrated Studies, BA

Introduction

Please click here (p. 598) to see Integrated Studies Major information.

The Integrated Studies, BA provides students with maximum flexibility and multiple pathways through the curriculum, to complete a degree through the combination of two course clusters.

One cluster must be based on a CLAS minor or certificate in the CU Denver catalog. The cluster must be at least 15 credits, and students can add additional courses (up to 21 credits total in one discipline) to either meet this 15-credit minimum or fulfill the minor or certificate's requirements if they exceed 15 credits.

- The second cluster must also be at least 15 credits. This cluster is more flexible and can be constructed in one of three ways:
  - 1) it can be based on a minor or certificate in the catalog (within CLAS or another school or college)
  - 2) it can be constructed by the student using a group of courses from a variety of disciplines that form a coherent body of knowledge (an interdisciplinary cluster)
  - 3) it can be based on a pre-formed thematic cluster with an already-approved group of classes.
- Students also complete an introductory and capstone course bringing together the learning from their two clusters.

This degree is also designed to help students integrate previously completed coursework to design a novel major. It is especially helpful for students who have switched majors, colleges or institutions, and are looking for a meaningful way to complete their degree.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is both an on-campus and online program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students are required to submit a program plan that includes a course contract and a proposal, if they plan to use any constructed clusters. Copies of completed Integrated Studies course contracts must be filed with the Integrated Studies Faculty Advisor and with the student's CLAS Academic Advisor.
- The Integrated Studies course contract must include:
  - A list of the courses in your chosen clusters as well as potential alternate courses. You should work closely with the Integrated Studies Faculty Advisor and faculty advisors in your chosen clusters to create your course contract.
  - Signatures from your Integrated Studies Faculty Advisor, from any faculty advisors from minors used in your contract, and from your CLAS Academic Advisor.
- The Integrated Studies constructed cluster proposal form must include:
  - a title for the cluster.
  - a list of proposed courses (including alternates).
  - a one-paragraph explanation of how the cluster constitutes a coherent body of knowledge.
  - approval from your Faculty Advisor.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Students are responsible for meeting with the major/faculty advisor in the program to confirm major requirements. In addition to completing all CU Denver Core and CLAS requirements, students completing the Integrated Studies B.A. Degree are required to complete the following minimum program requirements:

1. Students must complete a minimum of 36 credits from approved coursework.
2. Students must complete a minimum of 18 upper division (3000 level and above) credit hours including a minimum of six upper division level credit hours in each cluster and six upper division hours in the required courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. A minimum of 18 credits in the major, including six credits in each course cluster, in addition to IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone must be completed with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. At least half of all credits in the Integrated Studies option must be from CLAS departments.
2. Each course cluster in the major option must consist of at least 15 credit hours and one cluster must be based on a CLAS minor or certificate in the CU Denver catalog.
3. If students choose to use minors or certificates to form clusters for their major, they will earn those credentials in addition to the major, as long as they have completed all of the requirements for the minor or certificate and are certified by the designated faculty advisor.
4. Students can apply credits they earned before declaring the Integrated Studies major.
5. Students must submit a course contract which includes a list of all the courses they have already taken or intend to take for the major. The Integrated Studies Faculty Advisor must approve the contract to confirm that it meets the requirements of any minors, certificates, or constructed clusters used for the major.
6. Once the Integrated Studies option course contract is filed, any changes to coursework must be resubmitted to the Integrated

Studies Faculty Advisor for approval and then approved by the student's CLAS Academic Advisor.

7. Students may petition the Integrated Studies Faculty Advisor to fulfill their introduction and capstone outside of IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone.

Roles and Responsibilities

STUDENT

- creates the Integrated Studies course contract and constructed cluster proposal in collaboration with the Integrated Studies Faculty Advisor
- meets regularly with Integrated Studies Faculty Advisor to assess progress through their degree
- fulfills requirements of Integrated Studies course contract

Integrated Studies Faculty Advisor

- approves Integrated Studies course contract
- approves student proposals for constructed clusters
- meets with Integrated Studies advisees to monitor progress
- maintains records of Integrated Studies applications
- oversees advisees' capstone projects
- certifies graduation

Other Faculty Advisors

- approve minor and certificate requirements included within the course contract
- helps with capstone projects when needed

CLAS Academic Advisor

- reviews overall course contract
- maintains records of Integrated Studies contracts

Code	Title	Hours
Complete the following program requirements:		**36**
Complete the following required courses:		*6*
IDMA 3100	Learning Across Disciplines [1]	
IDMA 4900	Interdisciplinary Studies Capstone [2]	
Complete two course clusters: [3]		*30*
Complete a minimum of 15 credit hours from any CLAS minor or certificate. [4]		
Complete a minimum of 15 credit hours from a second CU Denver minor or certificate, from one of the following approved Thematic Clusters, or by designing your own cluster. [5]		
Aging and End of Life Cluster (p. 601)		
Art and Visual Culture Cluster (p. 601)		
Biology and Society Cluster (p. 601)		
Cities, Spaces, and Society Cluster (p. 601)		
Drugs and Addiction Cluster (p. 602)		
Food and Nutrition Cluster (p. 602)		
Media Cluster (p. 602)		
Organizations and Leadership Cluster (p. 602)		
Policy and Security Cluster (p. 603)		
Sexuality Cluster (p. 603)		
Violence and Conflict Cluster (p. 603)		

1 Should be taken early in the academic career (i.e. sophomore year.)

2 Should be taken toward then end of the academic career (i.e. senior year.)

3 Each cluster must consist of at least 15 credit hours. Students can add additional courses (up to 21 credits total in one discipline) to either meet this 15 credit minimum or fulfill the minor or certificate's requirements if they exceed 15 credits. Students should consult regularly with their Integrated Studies Faculty Advisor to learn about new minors and certificates that may apply.

4 Approved CLAS minors and certificates: African American Studies Undergraduate Certificate (p. 500), American Indian Studies Undergraduate Certificate (p. 501), Anthropology Minor (p. 393), Applied Statistics Undergraduate Certificate (p. 684), Astrophysics Minor (p. 760), Behavioral Cognitive Neuroscience Minor (p. 815), Biochemistry Minor (p. 416), Biology Minor (p. 622), Biophysics Minor (p. 762), Biotechnology Undergraduate Certificate (p. 624), Chemistry Minor (p. 418), Chinese Studies Minor (p. 721), Civics, Public Policy and Equity Undergraduate Certificate (p. 871), Communication Minor (p. 433), Community Health and Medicine Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/sociology/sociology-health-medicine-certificate/), Creative Writing Minor (p. 482), Criminology Undergraduate Certificate (p. 843), Cultural Diversity Studies Undergraduate Certificate (p. 503), Data Sciences Minor (p. 681), Data Science Undergraduate Certificate (p. 686), Digital Studies Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/clas-iinterdisciplinary-certificates/digital-studies-certificate/), Economics Minor (p. 458), English Writing, Rhetoric, and Technology Minor (p. 484), Environmental Sciences Minor (p. 528), Environmental Stewardship of Indigenous Lands Undergraduate Certificate (p. 626), Ethics Minor (p. 744), Ethnic Studies Minor (p. 499), Families and Social Welfare Undergraduate Certificate (p. 845), Film Studies Minor (p. 486), Free and Open Source Software for Geospatial Applications Undergraduate Certificate (p. 535), French Minor (p. 723), Geography Minor (p. 531), Geographic Information Science Undergraduate Certificate (p. 533), Global and Intercultural Communication Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/communication/global-intercultural-communication-certificate/), Health Communication Undergraduate Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/communication/health-communication-certificate/), Health and Development Economics Undergraduate Certificate (p. 459), Health Humanities Minor (p. 557), History Minor (p. 577), Humanities Minor (p. 586), Immigration Studies Undergraduate Certificate (p. 580), International Studies Minor (p. 650), Labor Leadership Undergraduate Certificate (p. 794), Latinx Studies Undergraduate Certificate (p. 504), Law Studies Minor (p. 656), Linguistics Minor (p. 724), Literature Minor (p. 487), Mathematics Minor (p. 683), Mediation Undergraduate Certificate (p. 438), Middle Eastern Politics Undergraduate Certificate (p. 795), Philosophy Minor (p. 746), Philosophy of Science Minor (p. 747), Physics Minor (p. 764), Political Science Minor (p. 789), Professional Skills Undergraduate Certificate (p. 875), Psychology Minor (p. 816), Public Health Demography Minor (p. 551), Public Health Minor (p. 553), Public, Non-Profit and Community Leadership Undergraduate Certificate (p. 797), Religious Studies Minor

(p. 822), Social Justice Minor (p. 826), Sociology Minor (p. 840), Spanish Minor (p. 725), Spanish for the Health Professions Undergraduate Certificate (p. 726), Spanish for International Business Undergraduate Certificate (p. 728), Strategic Communication Undergraduate Certificate (p. 440), Sustainability Minor (p. 851), Sustainable Urban Agriculture Undergraduate Certificate (p. 537), Teaching English Language Learners Undergraduate Certificate (p. 490), Technical and Professional Writing Undergraduate Certificate (p. 491), Urban and Regional Planning Minor (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/geography-environmental-sciences/urban-regional-planning-minor/), Women's and Gender Studies Minor (p. 859)

[5] Students may choose a minor or certificate from any school or college.

Age and End of Life Cluster

Code	Title	Hours
ANTH 3666	Anthropology of Death	
IWKS 4520	Design for Healthful Human Longevity	
PHIL 3550	Philosophy of Death and Dying	
PSYC 2205	Lifespan Developmental Psychology for Health Majors	
PSYC 3822	Aging, Brain and Behavior	
RLST 4460	Death and Concepts of Afterlife	
SOCY 3570	Death & Dying: Social & Medical Perspectives	
SOCY 4290	Aging, Society and Social Policy	
SOCY 4650	Sociology of Adulthood and Aging	

Art and Visual Culture Cluster

Code	Title	Hours
COMM 4621	Visual Communication	
ENGL 2250	Introduction to Film	
ENGL 3070	Studies in Film History	
ENGL 3075	Film Genres	
ENGL 3080	Global Cinema	
ENGL 3300	Topics in Film	
ENGL 3301	Topics in Film: Am. Lit	
ENGL 3302	Topics in Film: Before 1650	
ENGL 3303	Topics in Film: 1650-1900	
ENGL 4420	Film Theory and Criticism	
ETST 3036	American Indian Cultural Images	
FITV 1001	Fundamentals of Film and Television	
FITV 1200	The Culture of Television	
FITV 3200	History of Cinematic Arts I	
FITV 3611	Drama of Diversity	
FINE 1001	Introduction to Art	
FINE 1450	Visual Culture: Ways of Seeing	
FINE 2600	Art History Survey I	
FINE 2610	Art History Survey II	
FINE 3520	Sculpture: Contemporary Artists and Concepts	
FINE 3630	History of Photography	
FINE 3636	Through the Lens: Photography and Diversity	
FINE 3640	Topics in Art History I: Art Before Modernism	
FINE 3644	Topics in Art History II: Modern and Contemporary	
FINE 3775	Asian Art, 1850 to Now	
FINE 4523	Topics in Art History I: Art Before Modernism	
FINE 4524	Topics in Art History II: Modern and Contemporary Art	
FINE 4525	Museum Studies	
FINE 4600	History of Modern Design:Industrial Revolution-Present	
FINE 4610	Pre-Columbian Art	
FINE 4620	American Art	
FINE 4630	History of Latin American Art:1520-1820	
FINE 4670	Greek and Roman Art	
FINE 4680	Art of the Medieval Multiverse	
FINE 4700	Italian Renaissance Art	
FINE 4705	Northern Renaissance Art	
FINE 4710	Baroque and Rococo Art	
FINE 4730	Arts of Japan	
FINE 4750	Arts of China	
FINE 4770	Art of India and Southeast Asia	
FINE 4970	Modernist Art	
FINE 4980	Gender in Contemporary Art	
FINE 4990	Contemporary Art: 1960 to Present	
FINE 4993	Topics Seminar in Art History I: Art before Modernism	
FINE 4994	Topics Seminar in Art History II: Modern and Contemporary Art	
GEOG 2080	Introduction to Mapping and Map Analysis	
HIST 3070	Studies in Film History	
HIST 4228	Western Art and Architecture	
HIST 4231	History in Museums	

Biology and Society Cluster

Code	Title	Hours
ANTH 4600	Medical Anthropology	
BIOL 3104	Behavioral Genetics	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSYC 2220	Biological Basis of Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
SOCY 4220	Population Change and Analysis	

Cities, Spaces, and Society Cluster

Code	Title	Hours
ARCH 1110	Introduction to Architecture	
ARCH 2230	Architectural History I	
ARCH 3230	Architectural History II	
ARCH 3693	Rome: Architecture & Urbanism	
ECON 4318	Urban Economics	
EDFN 4000	Food Justice in City & Schools	
EDHD 1019	Introduction to Urban Education	
ENVS 1342	Environment, Society and Sustainability	
GEOG 1602	Urban Studies and Planning	

GEOG 3401	Geography of Food and Agriculture
GEOG 4680	Urban Sustainability: Perspectives and Practice
GEOG 4450	Urban Food and Agriculture: Perspectives and Research
GEOG 4640	Urban Geography: Denver and the U.S.
GEOG 4085	GIS Applications for the Urban Environment
HIST 4225	Urban America
HIST 3349	Social Movements in 20th Century America
HIST 3345	Immigration and Ethnicity in American History
HIST 3482	Rome: City and Empire
LDAR 4435	Community Engaged Design Practice
MUSC 3730	Introduction to Music Cities
PSCI 3914	The Urban Citizen
PSCI 4075	Gentrification and Social Equity
PSCI 4124	Denver Politics
PUAD 4628	Social Problems and Policies in the Urban Environment
SOCY 3001	Urban Sociology
SOCY 4590	Crime, Justice, and the City
URPL 3000	Planning the Built Environment

Drugs and Addiction Cluster

Code	Title	Hours
ANTH 3045	Cannabis Culture	
ANTH/PBHL 4090	Psychedelic Anthropology	
ECON 3400	Economics of Sex and Drugs	
PSYC 3265	Drugs, Brain and Behavior	
SOCY 3040	Drugs, Alcohol & Society	

Food and Nutrition Cluster

Code	Title	Hours
CHEM 2300	Nutritional Chemistry	
COMM 4601	You Are What You Eat: Food as Communication	
EDFN 4000	Food Justice in City & Schools	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	

Media Cluster

Code	Title	Hours
COMM 1021	Introduction to Media Studies	
COMM 2051	Introduction to Strategic Communication	
COMM 2071	Media Writing Skills	
COMM 3650	Media and Society	
COMM 3660	Social Media for Social Change	
COMM 4051	Advanced Strategic Communication	
COMM 4610	Communication, Media, and Sex	
COMM 4621	Visual Communication	
COMM 4660	Queer Media Studies	
COMM 4665	Principles of Advertising	
CRJU 3251	Crime and the Media	
CSCI 4920	Computer Game Design and Programming	
DACD 3820	Animation 1: Introduction to Animation and Rigging	
ENGL 1601	Storytelling: Literature, Film, and Television	
ENGL 2250	Introduction to Film	
ENGL 3075	Film Genres	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3106	Writing for Print Media	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
ENGL 4420	Film Theory and Criticism	
ENGR 3400	Technology and Culture	
ENGR 3600	International Dimensions of Technology and Culture	
ETST 3036	American Indian Cultural Images	
ETST 3272	Global Media	
FINE 3424	Interactive Media	
INTE 4300	Critical Digital Literacies	
INTE 4340	Learning with Digital Stories	
INTE 4665	Learning with Social Media and Networking	
ISMG 3000	Technology In Business	
PHIL 4920	Philosophy of Media and Technology	
PSCI 4014	Media and Politics	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

Organizations and Leadership Cluster

Code	Title	Hours
BLAW 3050	Business Law and Ethics	
COMM 2045	Workplace Communication	
COMM 2051	Introduction to Strategic Communication	
COMM 4111	Theories of Leadership	
COMM 4240	Organizational Communication	
COMM 4255	Negotiations and Bargaining	
COMM 4260	Communication and Conflict	
ECON 4740	Industrial Organization	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENTP 3210	Visionary Leadership for New Ventures	
ETST 4165	Cultural Diversity Awareness in the Workplace	
HDFR 4003	Leadership and Organizations	
MGMT 3000	Managing Individuals and Teams	
MGMT 3010	Managing People for a Competitive Advantage	
MGMT 4370	Organization Design	
PHIL 3250	Business, Society, and Moral Responsibility	
PSYC 3145	Industrial and Organizational Psychology	
PUAD 1001	Why You Should Care About Government: Public Service and Administration	
PUAD 2001	Management for Public Service	
PUAD 3002	Organizational and Strategic Management	
PUAD 3003	Introduction to Nonprofit Organizations	
PUAD 3004	Managing Nonprofit Organizations	
PUAD 3005	Collaboration Across Sectors	

PUAD 4000	Human Resources and Ethics in Public Service
PUAD 4002	Leading and Engaging for the Public Good
PUAD 4009	Human Service Organizations

Policy and Security Cluster

Code	Title	Hours
COMM 4430	Communication, China, and the US	
COMM 4611	Rhetoric of Global Food Policy	
COMM 4682	Political Communication	
COMM 4720	Dynamics of Global Communication	
CRJU 4450	Homeland Security	
ENVS 1342	Environment, Society and Sustainability	
GEOG 4380	Anthropocene Futures	
GEOG 4440	Science, Policy and the Environment	
HIST 3121	The World at War, 1914-1945	
HIST 3345	Immigration and Ethnicity in American History	
HIST 4032	Globalization in World History Since 1945	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation	
HIST 4475	The Vietnam War	
HIST 4490	Weapons of Mass Destruction	
PHIL 3280	War and Morality	
PSCI 4146	Indigenous Politics	
PSCI 4216	International Politics: Human Rights	
PSCI 4237	American National Security	
PSCI 4240	International Security	
PSCI 4280	The Politics of War Law	
PSCI 4354	Environmental Politics	
PSCI 4365	Global Ecological Crises	
PSCI 4545	Immigration Politics	
PSCI 4807	Political Violence	
PUAD 4010	Public Service in Emergency Management and Homeland Security	

Sexuality Cluster

Code	Title	Hours
BIOL 3074	Human Reproductive Biology	
COMM 4610	Communication, Media, and Sex	
COMM 4660	Queer Media Studies	
ECON 3400	Economics of Sex and Drugs	
ENGL 4306	Survey of Feminist Thought	
ENGL 4308	Contemporary Feminist Thought	
ENGL 4510	Whores and Saints: Medieval Women	
ETST 4305	Women of Color Feminisms	
HIST 3343	Women & Gender in US History	
HIST 4303	Sex and Gender in Modern Britain	
HIST 4307	History of Sexuality	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PBHL 3010	Human Sexuality and Public Health	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PBHL 4200	The Global HIV/AIDS Epidemic	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 4500	Feminist Philosophy	
PHIL 4933	Philosophy of Eros	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4564	Gender and Politics	
PSCI 4827	Women and the Law	
PSYC 3235	Human Sexuality	
PSYC 3263	Hormones and Behavior	
PSYC 3611	Psychology of Women	
SOCY 2440	Deviance and Social Control	
SOCY 3010	Sociology of Human Sexuality	
SOCY 3080	Sex and Gender	
SOCY 4270	Social Meanings of Reproduction	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

Violence and Conflict Cluster

Code	Title	Hours
HIST 3121	The World at War, 1914-1945	
HIST 3706	Age of Revolution	
HIST 4030	Europe During the World Wars	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
HIST 4212	Civil War and Reconstruction	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4415	Social Revolutions in Latin America	
HIST 4416	The Age of Imperialism	
HIST 4471	The Second World War	
HIST 4475	The Vietnam War	
HIST 4490	Weapons of Mass Destruction	
PHIL 3280	War and Morality	
PHIL 4450	Punishment and Social Justice	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4280	The Politics of War Law	
PSCI 4286	International Relations: War or Peace?	
PSCI 4807	Political Violence	
PSCI 4878	War, Film, and International Law	
SOCY 4460	Hate Groups and Group Violence	
SPAN 4360	Women and the Spanish Civil War	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/academic-programs/integrated-studies-major/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Integrated Studies, BS

Introduction

Please click here (p. 598) to see Integrated Studies Major information.

The Integrated Studies, BS provides students with maximum flexibility and multiple pathways through the curriculum, to complete a degree through the combination of two course clusters.

- One cluster must be based on a CLAS minor or certificate in the CU Denver catalog. The cluster must be at least 15 credits, and students can add additional courses (up to 21 credits total in one discipline) to either meet this 15-credit minimum or fulfill the minor or certificate's requirements if they exceed 15 credits.
- The second cluster must also be at least 15 credits. This cluster is more flexible and can be constructed in one of three ways:

  1) it can be based on a minor or certificate in the catalog (within CLAS or another school or college)

  2) it can be constructed by the student using a group of courses from a variety of disciplines that form a coherent body of knowledge (an interdisciplinary cluster)

  3) it can be based on a pre-formed thematic cluster with an already-approved group of classes.

- One of the two clusters must be composed of courses from Biology, Chemistry, Physics, Environmental Sciences, Mathematics, Statistics, Computer Science, Economics or Engineering. The cluster may be a minor or certificate in one of the areas mentioned previously. An additional six credits outside the clusters must also be in one of the above-defined areas.
- Students also complete an introductory and capstone course bringing together the learning from their two clusters. The required courses will give students the skills they need to describe the purpose, relevance, rigor, and innovation of their degree to potential employers.

This degree is also designed to help students integrate previously completed coursework to design a novel major. It is especially helpful for students who have switched majors, colleges or institutions, and are looking for a meaningful way to complete their degree.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is both an on-campus and online program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students are required to submit a program plan that includes a course contract and a proposal, if they plan to use any constructed clusters. Copies of completed Integrated Studies course contracts must be filed with the Integrated Studies Faculty Advisor and with the student's CLAS Academic Advisor.
- The Integrated Studies course contract must include:
  - A list of the courses in your chosen clusters as well as potential alternate courses. You should work closely with the Integrated Studies Faculty Advisor and faculty advisors in your chosen clusters to create your course contract.
  - Signatures from your Integrated Studies Faculty Advisor, from any faculty advisors from minors used in your contract, and from your CLAS Academic Advisor.
- The Integrated Studies constructed cluster proposal form must include:
  - a title for the cluster.
  - a list of proposed courses (including alternates).
  - a one-paragraph explanation of how the cluster constitutes a coherent body of knowledge.
  - approval from your Faculty Advisor.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

Students are responsible for meeting with the major/faculty advisor in the program to confirm major requirements. In addition to completing all CU Denver Core and CLAS requirements, students completing the Integrated Studies, B.S. Degree are required to complete the following minimum program requirements:

1. Students must complete a minimum of 36 credits from approved coursework.
2. Students must complete a minimum of 18 upper division (3000 level and above) credit hours including a minimum of six upper division level credit hours in each cluster and six upper division hours in the required courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. A minimum of 18 credits in the major, including six credits in each course cluster, in addition to IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone, must be completed with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. At least half of all credits in the Integrated Studies, BS must be from CLAS departments.
2. Each course cluster in the major option must consist of at least 15 credit hours and one cluster must be based on a CLAS minor or certificate in the CU Denver catalog from Biology, Chemistry, Physics, Environmental Sciences, Mathematics, Statistics, or Economics.
3. If students choose to use minors or certificates to form clusters for their major, they will earn those credentials in addition to the major, as

long as they have completed all of the requirements for the minor or certificate and are certified by the designated faculty advisor.

4. Students can apply credits they earned before declaring the Integrated Studies major.
5. Students must submit a course contract which includes a list of all the courses they have already taken or intend to take for the major. The Integrated Studies Faculty Advisor must approve the contract to confirm that it meets the requirements of any minors, certificates, or constructed clusters used for the major.
6. Once the Integrated Studies option course contract is filed, any changes to coursework must be resubmitted to the Integrated Studies Faculty Advisor for approval and then approved by the student's CLAS Academic Advisor.
7. Students may petition the Integrated Studies Faculty Advisor to fulfill their introduction and capstone outside of IDMA 3100 Learning Across Disciplines and IDMA 4900 Interdisciplinary Studies Capstone.

Roles and Responsibilities

Student

- creates the Integrated Studies course contract and constructed cluster proposal in collaboration with the Integrated Studies Faculty Advisor
- meets regularly with Integrated Studies Faculty Advisor to assess progress through their degree
- fulfills requirements of Integrated Studies course contract

Integrated Studies Faculty Advisor

- approves Integrated Studies course contract
- approves student proposals for constructed clusters
- meets with Integrated Studies advisees to monitor progress
- maintains records of Integrated Studies applications
- oversees advisees' capstone projects
- certifies graduation

Other Faculty Advisors

- approve minor and certificate requirements included within the course contract
- helps with capstone projects when needed

CLAS Academic Advisor

- reviews overall course contract
- maintains records of Integrated Studies contracts

Code	Title	Hours
Complete the following program requirements:		**36**
Complete the following required courses:		*6*
IDMA 3100	Learning Across Disciplines [1]	
IDMA 4900	Interdisciplinary Studies Capstone [2]	
Complete two course clusters: [3]		*30*
Complete a minimum of 15 credit hours from a science-based CLAS minor or certificate [4]		
Complete a minimum of 15 credit hours from a second science-based CU Denver minor or certificate, by taking nine credits from one of the following approved Thematic Clusters and a minimum of six credits from Biology, Chemistry, Physics, Environmental Sciences, Mathematics, Statistics, Computer Science, Economics or Engineering, or by designing your own cluster, composed of a minimum of six credits from Biology, Chemistry, Physics, Environmental Sciences, Mathematics, Statistics, Computer Science, Economics or Engineering. [5]		
Aging and End of Life Cluster (p. 605)		
Art and Visual Culture Cluster (p. 606)		
Biology and Society Cluster (p. 606)		
Cities, Spaces, and Society Cluster (p. 606)		
Drugs and Addiction Cluster (p. 607)		
Food and Nutrition Cluster (p. 607)		
Media Cluster (p. 607)		
Organizations and Leadership Cluster (p. 607)		
Policy and Security Cluster (p. 607)		
Sexuality Cluster (p. 608)		
Violence and Conflict Cluster (p. 608)		

1 Should be taken early in the academic career (i.e. sophomore year.)

2 Should be taken toward then end of the academic career (i.e. senior year.)

3 Each cluster must consist of at least 15 credit hours. Students can add additional courses (up to 21 credits total in one discipline) to either meet this 15 credit minimum or fulfill the minor or certificate's requirements if they exceed 15 credits. Students should consult regularly with their Integrated Studies Faculty Advisor to learn about new minors and certificates that may apply.

4 Approved CLAS science-based minors and certificates: Applied Statistics Undergraduate Certificate (p. 684), Astrophysics Minor (p. 760), Biochemistry Minor (p. 416), Biology Minor (p. 622), Biochemistry Minor (p. 416), Biophysics Minor (p. 762), Biotechnology Undergraduate Certificate (p. 624), Chemistry Minor (p. 418), Data Sciences Minor (p. 681), Data Science Undergraduate Certificate (p. 686), Economics Minor (p. 458), Environmental Sciences Minor (p. 528), Health and Development Economics Undergraduate Certificate (p. 459), Mathematics Minor (p. 683), Physics Minor (p. 764).

5 Approved CU Denver minors and certificates from other schools and colleges: Computer Science minor (p. 342), Cybersecurity and Secure Computing certificate (p. 346), Computer Engineering minor (p. 356), Electrical Engineering minor (p. 357), Human-Centered Design and Innovation minor (p. 361), Human-Centered Design and Innovation certificate (p. 362).

Age and End of Life Cluster

Code	Title	Hours
ANTH 3666	Anthropology of Death	
IWKS 4520	Design for Healthful Human Longevity	
PHIL 3550	Philosophy of Death and Dying	
PSYC 2205	Lifespan Developmental Psychology for Health Majors	
PSYC 3822	Aging, Brain and Behavior	
RLST 4460	Death and Concepts of Afterlife	
SOCY 3570	Death & Dying: Social & Medical Perspectives	

SOCY 4290	Aging, Society and Social Policy
SOCY 4650	Sociology of Adulthood and Aging

Art and Visual Culture Cluster

Code	Title	Hours
COMM 4621	Visual Communication	
ENGL 2250	Introduction to Film	
ENGL 3070	Studies in Film History	
ENGL 3075	Film Genres	
ENGL 3080	Global Cinema	
ENGL 3300	Topics in Film	
ENGL 3301	Topics in Film: Am. Lit	
ENGL 3302	Topics in Film: Before 1650	
ENGL 3303	Topics in Film: 1650-1900	
ENGL 4420	Film Theory and Criticism	
ETST 3036	American Indian Cultural Images	
FITV 1001	Fundamentals of Film and Television	
FITV 1200	The Culture of Television	
FITV 3200	History of Cinematic Arts I	
FITV 3611	Drama of Diversity	
FINE 1001	Introduction to Art	
FINE 1450	Visual Culture: Ways of Seeing	
FINE 2600	Art History Survey I	
FINE 2610	Art History Survey II	
FINE 3520	Sculpture: Contemporary Artists and Concepts	
FINE 3630	History of Photography	
FINE 3636	Through the Lens: Photography and Diversity	
FINE 3640	Topics in Art History I: Art Before Modernism	
FINE 3644	Topics in Art History II: Modern and Contemporary	
FINE 3775	Asian Art, 1850 to Now	
FINE 4523	Topics in Art History I: Art Before Modernism	
FINE 4524	Topics in Art History II: Modern and Contemporary Art	
FINE 4525	Museum Studies	
FINE 4600	History of Modern Design:Industrial Revolution-Present	
FINE 4610	Pre-Columbian Art	
FINE 4620	American Art	
FINE 4630	History of Latin American Art:1520-1820	
FINE 4670	Greek and Roman Art	
FINE 4680	Art of the Medieval Multiverse	
FINE 4700	Italian Renaissance Art	
FINE 4705	Northern Renaissance Art	
FINE 4710	Baroque and Rococo Art	
FINE 4730	Arts of Japan	
FINE 4750	Arts of China	
FINE 4770	Art of India and Southeast Asia	
FINE 4970	Modernist Art	
FINE 4980	Gender in Contemporary Art	
FINE 4990	Contemporary Art: 1960 to Present	
FINE 4993	Topics Seminar in Art History I: Art before Modernism	
FINE 4994	Topics Seminar in Art History II: Modern and Contemporary Art	
GEOG 2080	Introduction to Mapping and Map Analysis	
HIST 3070	Studies in Film History	
HIST 4228	Western Art and Architecture	
HIST 4231	History in Museums	

Biology and Society Cluster

Code	Title	Hours
ANTH 4600	Medical Anthropology	
BIOL 3104	Behavioral Genetics	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSYC 2220	Biological Basis of Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
SOCY 4220	Population Change and Analysis	

Cities, Spaces, and Society Cluster

Code	Title	Hours
ARCH 1110	Introduction to Architecture	
ARCH 2230	Architectural History I	
ARCH 3230	Architectural History II	
ARCH 3693	Rome: Architecture & Urbanism	
ECON 4318	Urban Economics	
EDFN 4000	Food Justice in City & Schools	
EDHD 1019	Introduction to Urban Education	
ENVS 1342	Environment, Society and Sustainability	
GEOG 1602	Urban Studies and Planning	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4680	Urban Sustainability: Perspectives and Practice	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4085	GIS Applications for the Urban Environment	
HIST 4225	Urban America	
HIST 3349	Social Movements in 20th Century America	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3482	Rome: City and Empire	
LDAR 4435	Community Engaged Design Practice	
MUSC 3730	Introduction to Music Cities	
PSCI 3914	The Urban Citizen	
PSCI 4075	Gentrification and Social Equity	
PSCI 4124	Denver Politics	
PUAD 4628	Social Problems and Policies in the Urban Environment	
SOCY 3001	Urban Sociology	
SOCY 4590	Crime, Justice, and the City	
URPL 3000	Planning the Built Environment	

Drugs and Addiction Cluster

Code	Title	Hours
ANTH 3045	Cannabis Culture	
ANTH/PBHL 4090	Psychedelic Anthropology	
ECON 3400	Economics of Sex and Drugs	
PSYC 3265	Drugs, Brain and Behavior	
SOCY 3040	Drugs, Alcohol & Society	

Food and Nutrition Cluster

Code	Title	Hours
CHEM 2300	Nutritional Chemistry	
COMM 4601	You Are What You Eat: Food as Communication	
EDFN 4000	Food Justice in City & Schools	
GEOG 3401	Geography of Food and Agriculture	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4460	Sustainable Urban Agriculture Field Study I	
GEOG 4470	Sustainable Urban Agriculture Field Study II	

Media Cluster

Code	Title	Hours
COMM 1021	Introduction to Media Studies	
COMM 2051	Introduction to Strategic Communication	
COMM 2071	Media Writing Skills	
COMM 3650	Media and Society	
COMM 3660	Social Media for Social Change	
COMM 4051	Advanced Strategic Communication	
COMM 4610	Communication, Media, and Sex	
COMM 4621	Visual Communication	
COMM 4660	Queer Media Studies	
COMM 4665	Principles of Advertising	
CRJU 3251	Crime and the Media	
CSCI 4920	Computer Game Design and Programming	
DACD 3820	Animation 1: Introduction to Animation and Rigging	
ENGL 1601	Storytelling: Literature, Film, and Television	
ENGL 2250	Introduction to Film	
ENGL 3075	Film Genres	
ENGL 3084	Digital Writing and Storytelling	
ENGL 3106	Writing for Print Media	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
ENGL 4420	Film Theory and Criticism	
ENGR 3400	Technology and Culture	
ENGR 3600	International Dimensions of Technology and Culture	
ETST 3036	American Indian Cultural Images	
ETST 3272	Global Media	
FINE 3424	Interactive Media	
INTE 4300	Critical Digital Literacies	
INTE 4340	Learning with Digital Stories	
INTE 4665	Learning with Social Media and Networking	
ISMG 3000	Technology In Business	
PHIL 4920	Philosophy of Media and Technology	
PSCI 4014	Media and Politics	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

Organizations and Leadership Cluster

Code	Title	Hours
BLAW 3050	Business Law and Ethics	
COMM 2045	Workplace Communication	
COMM 2051	Introduction to Strategic Communication	
COMM 4111	Theories of Leadership	
COMM 4240	Organizational Communication	
COMM 4255	Negotiations and Bargaining	
COMM 4260	Communication and Conflict	
ECON 4740	Industrial Organization	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENTP 3210	Visionary Leadership for New Ventures	
ETST 4165	Cultural Diversity Awareness in the Workplace	
HDFR 4003	Leadership and Organizations	
MGMT 3000	Managing Individuals and Teams	
MGMT 3010	Managing People for a Competitive Advantage	
MGMT 4370	Organization Design	
PHIL 3250	Business, Society, and Moral Responsibility	
PSYC 3145	Industrial and Organizational Psychology	
PUAD 1001	Why You Should Care About Government: Public Service and Administration	
PUAD 2001	Management for Public Service	
PUAD 3002	Organizational and Strategic Management	
PUAD 3003	Introduction to Nonprofit Organizations	
PUAD 3004	Managing Nonprofit Organizations	
PUAD 3005	Collaboration Across Sectors	
PUAD 4000	Human Resources and Ethics in Public Service	
PUAD 4002	Leading and Engaging for the Public Good	
PUAD 4009	Human Service Organizations	

Policy and Security Cluster

Code	Title	Hours
COMM 4430	Communication, China, and the US	
COMM 4611	Rhetoric of Global Food Policy	
COMM 4682	Political Communication	
COMM 4720	Dynamics of Global Communication	
CRJU 4450	Homeland Security	
ENVS 1342	Environment, Society and Sustainability	
GEOG 4380	Anthropocene Futures	
GEOG 4440	Science, Policy and the Environment	
HIST 3121	The World at War, 1914-1945	
HIST 3345	Immigration and Ethnicity in American History	
HIST 4032	Globalization in World History Since 1945	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation	
HIST 4475	The Vietnam War	

HIST 4490	Weapons of Mass Destruction
PHIL 3280	War and Morality
PSCI 4146	Indigenous Politics
PSCI 4216	International Politics: Human Rights
PSCI 4237	American National Security
PSCI 4240	International Security
PSCI 4280	The Politics of War Law
PSCI 4354	Environmental Politics
PSCI 4365	Global Ecological Crises
PSCI 4545	Immigration Politics
PSCI 4807	Political Violence
PUAD 4010	Public Service in Emergency Management and Homeland Security

Sexuality Cluster

Code	Title	Hours
BIOL 3074	Human Reproductive Biology	
COMM 4610	Communication, Media, and Sex	
COMM 4660	Queer Media Studies	
ECON 3400	Economics of Sex and Drugs	
ENGL 4306	Survey of Feminist Thought	
ENGL 4308	Contemporary Feminist Thought	
ENGL 4510	Whores and Saints: Medieval Women	
ETST 4305	Women of Color Feminisms	
HIST 3343	Women & Gender in US History	
HIST 4303	Sex and Gender in Modern Britain	
HIST 4307	History of Sexuality	
HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
PBHL 3010	Human Sexuality and Public Health	
PBHL 3071	Global Topics In Sexual and Reproductive Health	
PBHL 4200	The Global HIV/AIDS Epidemic	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 4500	Feminist Philosophy	
PHIL 4933	Philosophy of Eros	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4564	Gender and Politics	
PSCI 4827	Women and the Law	
PSYC 3235	Human Sexuality	
PSYC 3263	Hormones and Behavior	
PSYC 3611	Psychology of Women	
SOCY 2440	Deviance and Social Control	
SOCY 3010	Sociology of Human Sexuality	
SOCY 3080	Sex and Gender	
SOCY 4270	Social Meanings of Reproduction	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	

Violence and Conflict Cluster

Code	Title	Hours
HIST 3121	The World at War, 1914-1945	
HIST 3706	Age of Revolution	
HIST 4030	Europe During the World Wars	
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.	
HIST 4212	Civil War and Reconstruction	
HIST 4220	U.S. Foreign Policy Since 1912	
HIST 4415	Social Revolutions in Latin America	
HIST 4416	The Age of Imperialism	
HIST 4471	The Second World War	
HIST 4475	The Vietnam War	
HIST 4490	Weapons of Mass Destruction	
PHIL 3280	War and Morality	
PHIL 4450	Punishment and Social Justice	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4280	The Politics of War Law	
PSCI 4286	International Relations: War or Peace?	
PSCI 4807	Political Violence	
PSCI 4878	War, Film, and International Law	
SOCY 4460	Hate Groups and Group Violence	
SPAN 4360	Women and the Spanish Civil War	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/academic-programs/integrated-studies-major/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Integrative Biology

Chair: Michael J. Greene
Program Assistants: Barbara Schmidt, Barbara McClure
Administrative Assistant: Jacki Craig
Undergraduate BS Program Director: Kimberly F. Regier
Graduate Program Director: Michael Wunder
Lab Coordinator: James Salmen, Munira Lantz, Kristen Baird, Sladjana Subotic
Office: Science, 2071
Telephone: 303-315-7600
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Overview

Integrative Biology is the study of living organisms at different levels of organization, from molecular biology to biosphere ecology. Our undergraduate curriculum is designed to offer a firm foundation for understanding life processes, and a variety of biology electives to accommodate individual interests. Our courses prepare students to enter a wide variety of biological careers including health care, ecology, and bioengineering. Our graduates have the tools needed to think critically and to make informed decisions as citizens sharing the responsibility to take care of society and of Earth.

Departmental Honors

Departmental honors is only eligible for students who take classes for letter grades, with associated GPA values. Departmental honors is awarded to students based on their GPA in CU classes. The following minimum GPA must be met both for all overall CU GPA and for biology courses alone (biology GPA) to receive the following honors levels: *cum laude*, 3.500; *magna cum laude*, 3.700; *summa cum laude*, 3.900.

Biology Research Scholars

The biology faculty encourages students to pursue research as part of their undergraduate education. Students who excel in both course work and research will be recognized as CU Denver Biology Research Scholars or Research Associates.

To qualify for the ***Research Scholars Program***, you must:

- achieve a minimum grade point average of 3.500 in all courses taken from CU Denver faculty, as well as in all CU Denver biology courses
- participate in a research project, consisting of a minimum of six credit hours of independent study (BIOL 2840 Independent Study, BIOL 3840 Independent Study, or BIOL 4840 Independent Study), taken over at least two semesters
- write a scientific paper describing the research
- present an oral or poster presentation summarizing your research

To qualify for the ***Research Associates Program***, you must:

- achieve a minimum grade point average of 2.500 in all courses taken from CU Denver faculty, as well as in all CU Denver biology courses
- participate in a research project, consisting of a minimum of three credit hours of independent study (BIOL 2840 Independent Study, BIOL 3840 Independent Study, BIOL 4840 Independent Study or BIOL 4880 Directed Research), taken over at least two semesters
- write a scientific paper describing the research or present an oral or poster presentation summarizing your research

Students who wish to become involved in research should contact Dr. Christopher Phiel no later than their junior year, and preferably sooner.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/integrative-biology/) catalog to read about our graduate programs.

Programs

- Biology, BS (p. 619)
- Biology Minor (p. 622)
- Biotechnology Undergraduate Certificate (p. 624)
- Environmental Stewardship of Indigenous Lands Undergraduate Certificate (p. 626)

Faculty

Professors:

Michael J. Greene, PhD, Oregon State University
John G. Swallow, PhD, University of Wisconsin Madison
Diana F. Tomback, PhD, University of California, Santa Barbara

Associate Professors:

Laurel Hartley, PhD, Colorado State University
Christopher S. Miller, PhD, University of California Los Angeles
Annika Mosier, PhD, Stanford University
Christopher J. Phiel, PhD, Thomas Jefferson University
Gregory Ragland, PhD, University of North Carolina Chapel Hill
Timberley M. Roane, PhD, University of Arizona
Alan Vajda, PhD, University of Colorado Boulder
Michael Wunder, PhD, Colorado State University

Assistant Professors:

Sara Branco, PhD, University of Chicago
Carlos Infante, PhD, Harvard University
Micheal Moore, PhD, Case Western Reserve University

Senior Instructors:

Hannah Anchordoquy, PhD, University of Colorado Boulder
Laurel Beck, PhD, Michigan State University
Gene Brooks, DDS, University of Missouri
Erin Kelso, PhD, Indiana University
David Knochel, PhD, University of Colorado Boulder
Paul Le, PhD, Univeristy of Colorado Denver
Lisa Johansen, PhD, University of Alabama
Molly Nepokroeff, PhD, University of Wisconsin Madison
Kimberly F. Regier, EdD, University of Colorado Denver

Research Associate Professor:

Brian Buma, PhD, University of Colorado Boulder

Emeritus Faculty:

Gerald Audesirk, PhD, California Institute of Technology
Teresa E. Audesirk, PhD, University of Southern California
Leo P. Bruederle, PhD, Rutgers, the State University of New Jersey
Amanda Charlesworth, PhD, University College, London
Linda K. Dixon, PhD, University of Illinois
John H. Freed, PhD, Stanford University
Charles A. Ferguson, PhD, University of Colorado Boulder
Cheri A. Jones, PhD, University of Florida

Bradley J. Stith, PhD, Washington State University

Biology (BIOL)

BIOL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

BIOL 1550 - Basic Biology: Ecology and the Diversity of Life (4 Credits)
Introduces the process of science, gene expression, biological diversity, evolution, and ecology. Highlights applications to contemporary issues. Lecture and lab course. Note: For students who are not majoring in biology. Biology and health career majors should not take this course. Students may not receive credit for this course if they have already received credit for BIOL 2010(2051) and BIOL 2020(2061). Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 1560 - Basic Biology: From Cells to Organisms (4 Credits)
Introduces the process of science, cell structure and function, survey of representative human and plant systems, and genetics. Highlights applications to contemporary issues. Lecture and lab course. Note: For students who are not majoring in biology. Biology and health career majors should not take this course. Students may not receive credit for this course if they have already received credit for BIOL 2010(2051) and BIOL 2020(2061). Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2010 - Organisms to Ecosystems (Gen Bio) (3 Credits)
Introduces four major areas of study: (1) evolution,(2) animal structure and function, (3) plant structure and function and (4) ecology. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Biology majors and pre-health career students must also take the accompanying laboratory BIOL 2011. No co-credit with BIOL 2030(2097) or BIOL 2061. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2011 - Organisms to Ecosystems Lab (Gen Bio) (1 Credit)
Investigations, observations, and experiments in evolution, bioinformatics, ecology, and animal behavior, anatomy, and physiology; requires off-campus field work. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Students are strongly encouraged to take BIOL 2010 concurrently or before they take this course. No co-credit with BIOL 2031(2098) or BIOL 2081. Term offered: fall, spring, summer. Max hours: 1 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2020 - Molecules to Cells (Gen Bio) (3 Credits)
Introduces four major areas of study: (1) the chemistry of biological systems; (2) the structure and function of the cell; (3) cellular energy transformations (photosynthesis and respiration); and (4) genetics (mitosis, meiosis, patterns of inheritance, molecular genetics). Note: This class is intended for students planning to take upper division biology courses and for biology majors. Biology majors and pre-health career students must also take the accompanying laboratory BIOL 2021. Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher. No co-credit with BIOL 2040(2095) or BIOL 2051. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher.
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

BIOL 2021 - Molecules to Cells Lab (Gen Bio) (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in cell biology, basic biochemical techniques, genetics, molecular genetics and applications of biotechnology. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Prereq: BIOL 2011 (2081) or BIOL 2031 (2098) with a C- or higher. No co-credit with BIOL 2041(2096) or BIOL 2071. Term offered: fall, spring, summer. Max hours: 1 Credit. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Prereq: BIOL 2011 (2081) or BIOL 2031 (2098) with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2030 - Honors Organisms to Ecosystems (Gen Bio) (3 Credits)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Introduces four major areas of study: evolution, animal structure/function, plant structure/function, and ecology.
Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences. Instructor permission required. No co-credit with BIOL 2010(2061) or BIOL 2097. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

BIOL 2031 - Honors Organisms to Ecosystems Lab (Gen Bio) (1 Credit)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UHL programs. Advanced study of evolution, plant and animal anatomy, developmental biology and includes two off-campus ecology field trips. Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences. No co-credit with BIOL 2011(2081) or BIOL 2098. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

BIOL 2040 - Honors Molecules to Cells (Gen Bio) (3 Credits)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Four major topics covered: the chemistry of biological systems, the structure/function of the cell, cellular energy transformations and genetics. Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher. Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01). Instructor permission required. No co-credit with BIOL 2020(2051) or BIOL 2095. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 2010 (2061) or BIOL 2030 (2097) with a grade of C- or higher Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01)
Typically Offered: Spring.

BIOL 2041 - Honors Molecules to Cells Lab (Gen Bio) (1 Credit)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Introduces the basic scientific approach and report preparation through exercises and experiments in cell biology, basic biomedical techniques, genetics, molecular genetics and applications of biotechnology. Instructor permission required. Prereq: BIOL 2011(2081) or BIOL 2031 (2098) with a grade of C- or higher. Restriction: restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01). No co-credit with BIOL 2021(2071) or BIOL 2096. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prerequisite: BIOL 2011 (2081) or BIOL 2031 (2098) with a grade of C- or higher Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01)
Typically Offered: Spring.

BIOL 2750 - Introduction to Molecular Research Techniques (2 Credits)
Designed to give background knowledge and hands-on experience for a person wanting to work in a molecular-research laboratory. Introduction to basic molecular techniques including micropipetting, making media, DNA and RNA isolation, restriction digest, RT-PCR, and gel electrophoresis. Max hours: 2 Credits.
Grading Basis: Letter Grade

BIOL 2840 - Independent Study (1-3 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Note: registration by special processing form only. Prereq: Students must have completed one year of general biology with a grade of "C-" or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of BIOL courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of BIOL courses with a 2.75 GPA in BIOL courses
Typically Offered: Fall, Spring, Summer.

BIOL 3010 - Biology Career and Professional Development Seminar (1 Credit)
Open to all science majors. This course develops a student's understanding of the breadth of biology careers, such as biotechnology, field research, and bench research. This course will also work to develop a student's resume and cover letter writing skills as well as interviewing and job searching skills. Guest speakers and UCD alumni from various biology fields and careers will share their insight. Meets weekly. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall.

BIOL 3020 - Practical Laboratory Skills (1 Credit)
Designed for Students who are interested in working in a professional biology laboratory. Covers improvement of manual dexterity skills, understanding common laboratory apparatus and handling biological macromolecules and living cells. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.

BIOL 3074 - Human Reproductive Biology (3 Credits)
Comprehensive study of anatomy and physiology of human reproduction. Embryogenesis of male and female reproductive systems and detailed analysis of contraception, world population growth, population control and implications of population growth are also covered. Note: Students will not receive credit for this class if they have already received credit for BIOL 4074. Prereq: BIOL 3611 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3104 - Behavioral Genetics (3 Credits)
Interdisciplinary course on relationships between behavior and heredity, with emphasis on human behavioral genetics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with PSYC 3104. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3124 - Introduction to Molecular Biology (3 Credits)
Provides an understanding of the structure and function of genetic material, with respect to the regulation of gene expression and protein synthesis. Emphasizes eukaryotic systems and understanding the significance of contemporary laboratory-based research. Prereq: BIOL 3832 with a grade of C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a C- or higher
Typically Offered: Fall.

BIOL 3134 - Advanced Topics (1-8 Credits)
Periodic examination of current topics in the field of biology. (See Schedule Planner for current topics). Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3137 - Advanced Special Topics with Lab (1-15 Credits)
Periodic examination of current topics in the field of biology. (See Schedule Planner for current topics). Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3225 - Human Physiology (4 Credits)
Human physiology is the study of how systems within the human organism operate, interact and are regulated in order to maintain a state of homeostasis. Upon completion of the course, a student should expect to have mastery of content material related to organ systems, for example the nervous system, skeletal muscle system, and reproductive system. Also upon completion of the course, a student should expect to improve professional competencies including their ability to apply systems and scientific thinking and communication related to physiology. Note: This is a combined lecture and lab course. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2039/2088), CHEM 2061(or 2091) and 2068(or 2069/2098) with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2039/2088), CHEM 2061(or 2091) and 2068(or 2069/2098) with a C- or higher.
Typically Offered: Fall.

BIOL 3244 - Human Anatomy (5 Credits)
This course introduces structural aspects of the human body from a systems-based approach, in both lecture and laboratory. The systems addressed include the integument, skeletal, muscular, nervous, digestive, respiratory, circulatory, immune, renal, reproductive and endocrine systems. Anatomical models, microscope slides and human cadavers are used in lab. Note: This is a combined lecture and lab course. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3330 - Plant Diversity (3 Credits)
Surveys all major plant groups using evolutionary and ecological principles to interpret patterns of diversity in form and function. Topics include reproduction and life cycles, adaptations and ecological interactions, paleobotany and biogeography, classification and taxonomy and evolution. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3411 - Principles of Ecology (3 Credits)
A lecture course that examines the interrelationships between organisms and their environments. Subject matter includes organism, population and ecosystem levels of study and application to current environmental issues. The emphasis is on the underlying principles of ecology that involve all types of organisms. Note: Satisfies core ecology requirement for biology major. May not be used as upper division biology elective. No co-credit with BIOL 3412. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3413 - Ecology Laboratory (2 Credits)
Provides hands-on experiences in ecology and appreciation for using research tools to study ecological systems. Students will learn a wide range of techniques and concepts related to population, community, ecosystem, urban, and physiological ecology. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, or be concurrently enrolled in BIOL 3411 in order to enroll in this course. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Co-req: BIOL 3411 with a C- or higher

BIOL 3445 - Introduction to Evolution (3 Credits)
Introduction to the processes and patterns of evolution. Topics include: history of evolutionary thought, origin of life, evidence for evolution , phylogenetics, evolutionary genetics, natural selection and other evolutionary forces, speciation and biodiversity , evolution of sexual reproduction and social organization. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3521 - Vertebrate Biology (3 Credits)
The Subphylum Vertebrata consists of fish, amphibians, reptiles, birds and mammals--some of the most fascinating and most threatened species on earth. This course covers the evolution, taxonomy, anatomy, physiology, ecology and conservation of these organisms. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3525 - Parasitology (3 Credits)
This course is designed to provide a foundation in parasitology and to improve skills in scientific writing to students interested in biodiversity, veterinarian medicine, public health, & health care. Prokaryotes are addressed briefly; the focus of this course is the natural history of 'traditional' eukaryotic parasites. Topics include evolutionary associations of parasites with plants and animals (including humans), modes of transmission, and general life cycles. Subject matter includes basic anatomy, epidemiology, and physiology, with a brief introduction to immunology. Note: may be used as an upper-division biology elective. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3611 - General Cell Biology (3 Credits)
Covers the structure and function of the cell including bioenergetics, membranes, secretion, respiration and the cell cycle. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3612 - Cell Biology Laboratory (3 Credits)
Laboratory course covering topics in cell and molecular biology, such as protein folding, membrane potential, organelle function, cell signaling and fertilization; as well as associated methods, including microscopy, cell culture and PCR. Basic skills are emphasized in recitation and laboratory. Prereq: General cell biology with a grade of "C-" or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3621 - Introduction to Immunology (3 Credits)
Provides an introduction to the basic concepts of immunology, including development of the immune system, innate immunity, aspects of the adaptive immune system, and the role of the immune system in disease, as well as allergies and autoimmunity. Prereq: BIOL 3611 and 3832 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and 3832 with a grade of C- or higher

BIOL 3640 - Mammalogy (4 Credits)
Lecture, laboratory, and required field trips. This course provides a general overview of the biology of mammals, including their diversity, distribution, economic importance, and other characteristics that make them of special interest to humans. Coverage will be worldwide, with special emphasis placed on the mammals of Colorado. Note: Students will not receive credit for this class if they have already received credit for BIOL 4640. Prereq: BIOL 3411 with a grade of C- or higher. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 3650 - General Microbiology (3 Credits)
Covers all aspects of the biology of microorganisms: their cellular structures and function, growth and metabolism, general and molecular genetics, diversity and interactions with other organisms and the environment (ecology). The objective is to provide students with a thorough introduction to microbiology including basic micro-biological laboratory techniques. Note: This is a combined lecture and lab course. No co-credit with BIOL 3654. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3651 - General Microbiology Lab (2 Credits)
Covers all aspects of the biology of microorganisms: their cellular structures and function, growth and metabolism, general and molecular genetics, diversity and interactions with other organisms and the environment (ecology). The objective is to provide students with a thorough introduction to microbiology including basic micro-biological laboratory techniques. No co-credit with BIOL 3654. Prereq or Coreq: BIOL 3650. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq/Coreq: BIOL 3650.
Typically Offered: Fall, Spring.

BIOL 3763 - Biostatistics (4 Credits)
Introduces statistical thinking in biology. Emphasizes data exploration and probability-based inference methods including estimation, testing, and confronting models with data. Concepts and examples for general and applied biology, including ecology and the health sciences. Includes exposure to statistical software. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) and MATH 1109, or MATH 1110, or MATH 1120, or 1130, or 1401, or 2411, or 2421 or 2830 with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) and MATH 1109 or MATH 1110 or MATH 1120, or 1130, or 1401, or 2411, or 2421 or 2830 with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3804 - Developmental Biology (3 Credits)
Covers gamete development, fertilization, and embryo development including establishing body axes, tissue differentiation and organ formation. Note: Students will not earn credit for BIOL 3804 if they have earned credit for BIOL 4054 and will not earn credit for BIOL 4054 if they have earned credit for BIOL 3804. Prereq: General cell biology with a grade of "C-" or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3832 - General Genetics (3 Credits)
Introduces molecular, classical, developmental and population genetics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3840 - Independent Study (1-3 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Prereq: Students must have completed one year of general biology with a grade of "C-" or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3939 - Internship (1-3 Credits)
Approved internships will provide opportunities to apply classroom knowledge in a professional environment and expand the student's knowledge of biology. Associated coursework includes scientific reading/writing and presentation(s). Prereq: BIOL 2051 or 2095 and BIOL 2061 or 2097 with a C or higher AND have junior level standing with a 2.75 GPA. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2051 or 2095 and BIOL 2061 or 2097 with a C or higher AND have junior level standing with a 2.75 GPA.
Typically Offered: Fall, Spring, Summer.

BIOL 4024 - Introduction to Biotechnology (3 Credits)
Introduces aspects of biotechnology within a historical context, including medical, forensic, agricultural and microbial biotechnology. Addresses principles behind state-of-the-field techniques in recombinant DNA technology, bioinformatics, proteomics and genomics. Biotechnology regulations and ethics will also be discussed. Prereq: BIOL 3832 with a C- or higher. Cross-listed with BIOL 5024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a C- or higher

BIOL 4050 - Advanced Biology Topics (1-8 Credits)
Examines current topics in the field of biology. Topics vary from term to term. See Schedule Planner for current topics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with BIOL 5050. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 4052 - Advanced Ecology (3 Credits)
This combination seminar and lecture course focuses on state-of-field knowledge, current theories and recent models in selected areas of ecology, such as theoretical ecology, evolutionary ecology, population biology and ecosystems ecology. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5052. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4053 - Disease Ecology (3 Credits)
The study of the underlying principles that influence the spatio-temporal patterns of infectious disease in environments. Students will apply ecological theories about concepts such as biodiversity, trophic interactions, landscape structure, and nutrient cycling to the study of disease. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5053. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4055 - Virology (3 Credits)
This is an upper level undergraduate/graduate class providing an in-depth study of the history of virology, different types of viruses, viral disease, research to combat viral infections, and different uses of viruses in biotechnology. Note: Students will not earn credit for this course if they have already earned credit for BIOL 4051 or BIOL 5051. Prereq: BIOL 3611 with a grade of C- or higher. Cross-listed with BIOL 5055. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4064 - Cell Biology of Disease (3 Credits)
Builds on the foundations laid in the prerequisite courses. How alterations in membrane transport, autophagy, mitochondria, lysosomes, cilia, unfolded protein response and autophagy lead to major human diseases. A major emphasis is the control and integration of cellular activities. Prereq: General cell biology with a C- or higher. One semester of Biochemestry is strongly recommended for optimal student success. Cross-listed with BIOL 5064. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4125 - Molecular Biology Laboratory (3 Credits)
Provides hands-on experiences in molecular biology and an appreciation for using the tools of molecular biology to study biological systems. Emphasis is placed on DNA cloning, PCR, mRNA and protein detection in the context of gene editing. Experimental design and the theories underlying the techniques are also discussed. Prereq: BIOL 3124 with a C- or higher or Coreq: BIOL 3124. Cross-listed with BIOL 5125. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher or Coreq: BIOL 3124
Typically Offered: Spring.

BIOL 4126 - Molecular Genetics (3 Credits)
Examines molecular techniques and their application to experimental genetics, specifically organization and mapping of genomes, application and model systems in defining hereditary components of disease, and mechanisms of identifying mutations and their implications for disease. Also addresses application of recombinant DNA technology. Prereq: Completion of Introduction to Molecular Biology with a C- or higher is required in order for students to enroll in this course. Cross-listed with BIOL 5126. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher

BIOL 4128 - Topics in Molecular Biology (3 Credits)
Literature-based course examining the regulation of gene expression in eukaryotic systems, as well as contemporary recombinant DNA technology and applications of molecular cloning techniques. Prereq: BIOL 3124 with a C- or higher; biochemistry strongly recommended. Cross-listed with BIOL 5128. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher

BIOL 4134 - Human Genetics (3 Credits)
Advanced survey of the current status of the field. Emphasis on understanding, diagnosis and treatment of genetic disease and on the impact of molecular biology on human genetics. Cross-listed with 5134. Prereq: General genetics with a grade of "C-" or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a grade of C- or higher

BIOL 4144 - Medical Microbiology (3 Credits)
Provides an understanding of the relationship between pathogenic organisms and their host. Emphasis is placed on the area of medical bacteriology, with attention given to mechanisms of pathogenesis, genetics of disease, serology and treatment. Prereq: general microbiology with a grade of "C-" or higher. Cross-listed with BIOL 5144. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3654 with a grade of C- or higher

BIOL 4154 - Conservation Biology (3 Credits)
Basic concepts and theories in ecology, population biology and genetics as they apply to issues relating to the preservation of biodiversity, such as the genetics of small populations, captive propagation, restoration ecology and the design of nature reserves. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5154. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4165 - Neurobiology (3 Credits)
Overview of neuroscience, covering the cellular basis of neuronal activity, sensory structures and the structure and function of the human brain. Prereq: BIOL 3611 and PSYC 2220 with a C- or higher OR BIOL 3225 with a C- or higher. Cross-listed with BIOL 5165. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and PSYC 2220 with a C- or higher OR BIOL 3225 with a C- or higher.

BIOL 4225 - Genomics and Bioinformatics (3 Credits)
Explores how genome-wide data are collected and analyzed. Example applications include human disease, microbial evolution, ecological genomics, and parasite drug resistance. Students implement projects based on real DNA sequencing data. Prereq: BIOL 3832 with a C- or higher.Cross-listed with BIOL 5225. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 3832 with a C- or higher.

BIOL 4250 - Mechanisms of Animal Behavior (3 Credits)
The proximate and ultimate mechanisms of animal behavior are analyzed using comparative animal examples from the scientific literature. Proximate mechanisms include genetic and physiological processes. Ultimate mechanisms include the role of natural and sexual selection in the evolution of behavior. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Genetics and human physiology are recommended. Cross-listed with BIOL 5250. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 4335 - Plant Structure and Development (4 Credits)
Inclusive and in-depth study of functional anatomy and biology of vascular plants. Topics include: plant biochemistry, biology of the plant cell, simple and complex tissues, secretory structures, functional anatomy, primary and secondary growth, angiosperm reproduction and life cycles, development and additional topics. Responsibilities include lectures, lab, and potential field trips. Course must be taken with both lecture and lab together. Prereq: One year of General Cell Biology (BIOL 3611) with a grade of "C-" or higher. Cross-listed with BIOL 5335. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher
Typically Offered: Spring.

BIOL 4345 - Flora of Colorado (4 Credits)
Inclusive and in-depth study of functional anatomy and biology of vascular plants. Topics include: plant biochemistry, biology of the plant cell, simple and complex tissues, secretory structures, functional anatomy, primary and secondary growth, angiosperm reproduction and life cycles, development and additional topics. Responsibilities include lectures, lab, and potential field trips. Course must be taken with both lecture and lab together. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5345. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4415 - Applied Microbial Ecology (3 Credits)
An in-depth study of ecology as it relates to microorganisms; abiotic and biotic interactions within microbial populations in macro- and microhabitats; and the role of microorganisms in influencing and responding to environmental conditions in natural and anthropogenic ecosystems. Emphasis is placed on how the ecology of microorganisms impacts how we engage with our environment. Prereq: General microbiology with a grade of "C-" or higher. Cross-listed with BIOL 5415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3654 with a grade of C- or higher
Typically Offered: Fall, Spring.

BIOL 4425 - Biogeography (3 Credits)
An in-depth study of biological populations through analysis of geographic distribution patterns in space and time. Emphasis on how biogeography informs studies of evolution and ecology and on applied studies in conservation, sustainability, epidemiology, and disease dynamics. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5425. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4430 - Introduction to Spatial Ecology (3 Credits)
Focuses on patterns of life and ecological interactions in space. Emphasis on drivers of patterns, practical application of spatial ecology software, programming, and introductory spatial statistics on the quantification of patterns. Main topics: Scale and scaling, pattern development, detecting and characterizing patterns, temporal dynamics, and implications of spatial structure to conservation biology, resilience, and ecosystem functioning. Cross-listed with BIOL 5430. Prereq: BIOL 3411 with C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4460 - Environmental Toxicology (3 Credits)
Text and literature-based course provides students with background knowledge concerning environmental toxins, the nature and extent of environmental contamination, and toxicant effects on individual organisms and populations. Prereq: BIOL 3611 with a grade of C- or higher. Cross-listed with BIOL 5460. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4464 - Exercise Physiology (3 Credits)
This course addresses the dynamic physiological changes associated with exercise. Where human physiology addresses physiological processes at rest, this course explores how the cardiovascular, respiratory, nervous and endocrine systems support increased energy transfer as skeletal muscle becomes more active. Prereq: Human Physiology (BIOL 3225 or equivalent) with a grade of C- or higher. Cross-listed with BIOL 5464. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3225 with a grade of C- or higher

BIOL 4475 - Mechanisms of Human Pathology (3 Credits)
Studies physiological, cellular and biochemical processes in human diseases. Mechanisms of inflammatory diseases, infectious diseases, neoplastic diseases, and others will be examined. Prereq: BIOL 3225 or BIOL 3244 with a grade of C- or higher. Cross-listed with BIOL 5475. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 3225 or BIOL 3244 with a C- or higher

BIOL 4494 - Population and Evolutionary Genetics (3 Credits)
Introduces the genetic processes underlying evolutionary change in microbial, plant and animal populations. Topics include: sources of variation, Hardy-Weinberg equilibrium, population genetic structure, natural selection and other evolutionary forces, quantitative genetics and molecular phylogenetics. Emphasis on experimental data. Prereq: Completion of General Genetics and Introduction to Evolution with a C- or higher is required in order for students to enroll in this course. Cross-listed with BIOL 5494. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 and BIOL 3445 with a C- or higher

BIOL 4550 - Cell Signaling (3 Credits)
Lecture by faculty and student presentations cover mechanism of hormones and regulation of various cellular processes through second messenger systems. Prereq: General cell biology with a grade of "C-" or higher; one semester of biochemistry recommended. Cross-listed with BIOL 5550. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4622 - Topics in Immunology (3 Credits)
An in-depth study of immunological concepts. Topics will vary from semester to semester and may range from specifics of immune cell responses to tolerance and autoimmunity. Delivery will include lecture, student presentations, and discussion. Prereq: BIOL 3621 with a C- or higher. Cross-listed with BIOL 5622. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3621 with a C- or higher

BIOL 4634 - Biology of Cancer (3 Credits)
Cancer is the second leading cause of death in the United States. This course offers an overview of recent research into the causes, treatments and possible prevention of cancer. Includes a detailed look at the mechanisms of action of various oncogenes. Prereq: BIOL 3611 and BIOL 3832 with a C- or higher. Cross-listed with BIOL 5634. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and BIOL 3832 with a C- or higher.

BIOL 4644 - Advanced Human Anatomy Laboratory (2 Credits)
Advanced laboratory course in human anatomy. In-depth look at the structural aspects of the human body, emphasizing function. Models, microscope slides, and visual media will supplement cadaver-based dissections. Prereq: One year of general biology and human anatomy with a grade of "C-" (2.0) or higher. Cross-listed with BIOL 5644. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3244 with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 4674 - Endocrinology (3 Credits)
This systematic survey of the endocrine system looks at the cellular basis and biochemical characteristics of individual endocrine tissues. Their function in the regulation of other endocrinological, physiological, and behavioral events is analyzed. The course emphasizes the human system and complements studies in physiology, behavior and neurobiology. Prereq: BIOL 3611 with a grade of C- or higher. Students will not earn credit for this course if they have already earned credit for BIOL 4674. Cross-listed with BIOL 5674. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4780 - Aquatic Ecology (3 Credits)
This course explores the physical, chemical, and biological (including human) properties of aquatic ecosystems, and how the interrelationships between these properties define and influence advanced ecological processes. Special focus is given to lakes, reservoirs, wetlands, streams, rivers, and groundwater. Learning is facilitated through lectures, discussions, student presentations, laboratory and data exercises, and periodic (often virtual) field excursions. Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher. Cross-listed with BIOL 5780, ENVS 4780, and ENVS 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher.

BIOL 4815 - Structural Biology of Neurodegenerative Diseases (3 Credits)
Advanced course in Biochemistry/Biophysics. Principles of Protein Folding, Structure-Function Relationship, and spectroscopic techniques related to characterization of these processes as applied to neurodegenerative diseases such as Parkinson's and Alzheimer's. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4815, CHEM 5815, and BIOL 5815. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4825 - Biochemistry of Metabolic Disease (3 Credits)
Advanced course in biochemistry. An expanded study of selected topics in metabolism and how they relate to diseases, including inflammation, diabetes, obesity, and rare genetic disorders. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4825, CHEM 5825, and BIOL 5825. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4835 - Biochemistry of Gene Regulation and Cancer (3 Credits)
Explores the biochemical and molecular aspects of cancer biology. Topics include DNA mutations and repair, gene regulation, oncogenes and tumor suppressors, stem cells and differentiation, and cancer drug development. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4835, CHEM 5835, and BIOL 5835. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4840 - Independent Study (1-6 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Note: Registration by special processing form only. Prereq: Students must have completed one year of general biology with a grade of "C-" or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 4880 - Directed Research (1-6 Credits)
A student designed lab or field-based investigation that involves data collection, and that makes an original intellectual or creative contribution to the discipline. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

BIOL 4910 - Field Studies (3 Credits)
Field studies of individuals, populations and communities comprising a specified ecosystem. Emphasis on field identification of vascular plants and vertebrate animals. Topics include the physical environment, biotic and abiotic interactions, life history, ecological adaptations and biogeography. Note: Lectures and a week-long field trip. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5910. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: BIOL 3411 with C- or higher.

BIOL 4974 - Advanced Evolution (3 Credits)
A capstone course that draws upon concepts from all fields of biology. Topics include the fossil record, mass extinctions, the historical development of the modern synthesis, principles and mechanisms of evolution, current viewpoints and controversies. Prereq: BIOL 3445 and 3832 with a C- or higher. Cross-listed with BIOL 5974. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3445 and 3832 with a grade of C- or higher

BIOL 4990 - Undergraduate Research Seminar (1 Credit)
Introduces research in the biological sciences. Students read current scientific literature, attend related seminars and participate in discussions. This course offers students a chance to interact with visiting scientists, who will present state-of-the-field biological research in a seminar setting. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), BIOL 3411, BIOL 3445, BIOL 3611 and BIOL 3832 with a C- or higher. Restriction: Restricted to Senior standing or higher with an overall GPA of 3.0 or higher. Cross-listed with BIOL 6655. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq:BIOL 2010(or 2061/2097/2030), BIOL 2011(or 2081/2098/2031), BIOL 2020(or 2051/2095/2040), BIOL 2021(or 2071/2096/2041), BIOL 3411,3445,3611 and BIOL 3832 with a C- or higher. Restriction: Senior standing or higher with GPA of 3.0 or higher.

Biology, BS

Introduction

Please click here (p. 609) to see Integrative Biology department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 55 credit hours, including a minimum of 36 BIOL credit hours and 19 credit hours in ancillary coursework.
2. Students must complete a minimum of 18 upper division (3000- level and above) BIOL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 upper division (3000-level and above) BIOL credit hours with CU Denver faculty and at least 3 credits must be at 4000-level or higher.

Program Restrictions, Allowances and Recommendations

1. Upper division BIOL courses more than ten years old will not count automatically to the Major, but can be evaluated individually for their current relevance to the degree program through a petition process with the Department of Integrative Biology Curriculum Committee. Approval for courses older than ten years is not guaranteed so students may be required to update their knowledge by taking additional courses when past courses are outdated.
2. Undergraduate students may count up to six credit hours of independent study or internship (any combination of BIOL 3840 Independent Study, BIOL 3939 Internship, BIOL 4840 Independent Study, BIOL 4880 Directed Research) toward the upper-division Biology electives requirement in the major.

Code	Title	Hours
Complete the following required courses:		*20*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	
BIOL 3411	Principles of Ecology	
BIOL 3445	Introduction to Evolution	
BIOL 3611	General Cell Biology	
BIOL 3832	General Genetics	

Complete a minimum of one upper division level (3000 or higher) Biology lab.		*2*
Upper Division Biology Lab Courses (p. 620)		
Complete a minimum of one 4000-level BIOL lecture course. [1]		*3*
4000-Level Biology Lecture Courses (p. 621)		
Complete at least 11 additional upper division level (3000 or higher) BIOL elective credits or enough BIOL elective credits to reach the minimum required total of 36 BIOL credits. [2]		*11*
Complete one of the following quantitative courses.		*3*
BIOL 3763	Biostatistics	
MATH 1401	Calculus I	
MATH 4830	Applied Statistics	
Complete the following required Chemistry courses.		*13*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
CHEM 3411	Organic Chemistry I	
or CHEM 3481	Majors Organic Chemistry I	
Complete one of the following writing intensive courses.		*3*
ENGL 4175	Writing in the Sciences (also satisfies CLAS Communicative Skills requirement)	
ENGL 3154	Technical Writing (also satisfies CLAS Communicative Skills requirement)	
ENGL 4280	Proposal and Grant Writing (also satisfies CLAS Humanities requirement)	
ENGL 4180	Argumentation and Logic (also satisfies CLAS Humanities requirement)	
COMM 4550	Rhetorics of Medicine & Health (also satisfies CLAS Behavioral Science requirement)	
Total Hours		**55**

1 Students must complete a minimum of one 4000-level Biology lecture course with CU Denver faculty.

2 CHEM 3810 Biochemistry or CHEM 4820 General Biochemistry II will also apply as an upper division level Biology elective.

Upper Division Biology Lab Courses

Code	Title	Hours
Complete at least one upper division level (3000 or higher) Biology lab course from the following list:		*2*
BIOL 3137	Advanced Special Topics with Lab	
BIOL 3225	Human Physiology	
BIOL 3244	Human Anatomy	
BIOL 3413	Ecology Laboratory	
BIOL 3612	Cell Biology Laboratory	
BIOL 3640	Mammalogy	
BIOL 3651	General Microbiology Lab	
BIOL 4125	Molecular Biology Laboratory	
BIOL 4335	Plant Structure and Development	
BIOL 4345	Flora of Colorado	
BIOL 4644	Advanced Human Anatomy Laboratory	
BIOL 4910	Field Studies	
Total Hours		**2**

4000-Level Biology Elective

Code	Title	Hours
Complete at least one three credit hour 4000-level or higher BIOL lecture course from CU Denver Biology faculty.		*3*
BIOL 4024	Introduction to Biotechnology	
BIOL 4050	Advanced Biology Topics	
BIOL 4052	Advanced Ecology	
BIOL 4053	Disease Ecology	
BIOL 4055	Virology	
BIOL 4064	Cell Biology of Disease	
BIOL 4126	Molecular Genetics	
BIOL 4128	Topics in Molecular Biology	
BIOL 4134	Human Genetics	
BIOL 4144	Medical Microbiology	
BIOL 4154	Conservation Biology	
BIOL 4165	Neurobiology	
BIOL 4225	Genomics and Bioinformatics	
BIOL 4250	Mechanisms of Animal Behavior	
BIOL 4335	Plant Structure and Development	
BIOL 4345	Flora of Colorado	
BIOL 4415	Applied Microbial Ecology	
BIOL 4425	Biogeography	
BIOL 4430	Introduction to Spatial Ecology	
BIOL 4460	Environmental Toxicology	
BIOL 4464	Exercise Physiology	
BIOL 4475	Mechanisms of Human Pathology	
BIOL 4494	Population and Evolutionary Genetics	
BIOL 4550	Cell Signaling	
BIOL 4622	Topics in Immunology	
BIOL 4634	Biology of Cancer	
BIOL 4815	Structural Biology of Neurodegenerative Diseases	
BIOL 4780	Aquatic Ecology	
BIOL 4825	Biochemistry of Metabolic Disease	
BIOL 4835	Biochemistry of Gene Regulation and Cancer	
BIOL 4974	Advanced Evolution	
Total Hours		**3**

To learn more about the Student Learning Outcomes for this program, please visit our website. (https://clas.ucdenver.edu/integrative-biology/academics/undergraduate-programs/#biology_major-73)

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Biology Minor

Introduction

Please click here (p. 609) to see Integrative Biology department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 27 credit hours, including a minimum of 18 BIOL credit hours and nine credit hours in approved ancillary coursework.
2. Students must complete a minimum of nine upper-division (3000-level and above) BIOL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Students cannot complete minor or ancillary course requirements using P+/P/F or S/U grading.
4. Students must complete a minimum of nine upper division level BIOL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Upper division BIOL courses more than ten years old will not count automatically to the Minor, but can be evaluated individually for their current relevance to the degree program through a petition process with the Department of Integrative Biology Curriculum Committee. Approval for courses older than ten years is not guaranteed so students may be required to update their knowledge by taking additional courses when past courses are outdated.

Code	Title	Hours
Complete the following required courses:		*8*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	
Complete a minimum of six credits from the following upper division level BIOL courses:		*6*
BIOL 3411	Principles of Ecology	
BIOL 3445	Introduction to Evolution	
BIOL 3611	General Cell Biology	
BIOL 3832	General Genetics	
Complete a minimum of four credits from at least two upper division (3000 level or higher) BIOL elective courses. At least one of the courses must be from the following approved list: [1]		*4*
BIOL 3137	Advanced Special Topics with Lab	
BIOL 3225	Human Physiology	

BIOL 3244	Human Anatomy	
BIOL 3413	Ecology Laboratory	
BIOL 3612	Cell Biology Laboratory	
BIOL 3640	Mammalogy	
BIOL 3651	General Microbiology Lab	
BIOL 4125	Molecular Biology Laboratory	
BIOL 4335	Plant Structure and Development	
BIOL 4345	Flora of Colorado	
BIOL 4644	Advanced Human Anatomy Laboratory	
BIOL 4910	Field Studies	
Complete all of the following ancillary course requirements:		*9*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2039	Majors General Chemistry I Laboratory	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2069	Majors General Chemistry II Laboratory	
or CHEM 2098	Honors General Chemistry II Laboratory	
Total Hours		**27**

[1] Note: BIOL 3020 Practical Laboratory Skills will not satisfy the upper division level elective requirement.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/integrative-biology/academics/undergraduate-programs/#biology_major-73).

Biotechnology Undergraduate Certificate

Introduction

Please click here (p. 609) to see Integrative Biology department information.

Biotechnology is a rapidly growing field in Colorado and nationally that encompasses many disciplines. Agriculture, biofuels, biomedical biotechnology, pharmaceuticals, microbiology, and medical device development are all well-represented areas of biotechnology in Colorado. The Department of Integrative Biology offers a Certificate program in Biotechnology that allows students to acquire foundational knowledge and specialized skills relevant to these research areas. The certificate is designed to provide a strong background in biochemistry and molecular biology, with an emphasis on applied training via lab work and research experiences. Upon completion of the requirements, students obtain recognition in the form of a Certificate and official designation on their transcript.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

Students may earn the certificate while working on their Bachelors Degree# or, the courses may be taken through non#degree admission. All admissions questions should be directed to the Admission's office. All questions regarding tuition and fees should be directed to the Bursar's office.

Students interested in completing the Biotechnology certificate should contact the Department of Integrative Biology. (https://clas.ucdenver.edu/integrative-biology/academics/certificates/#biotechnology_certificate-93) A certificate will be issued and noted on your transcript upon proof of satisfactory completion of the course work. You must contact the Biotechnology Certificate faculty advisor no later than the start of the semester of graduation in order for the certificate recognition to appear on your transcripts.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Biotechnology advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 17 credits from approved courses.
2. Students must complete a minimum of 17 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. All courses used to satisfy the requirements for the Certificate must be completed at CU Denver.

Program Restrictions, Allowances and Recommendations

1. Individual courses used to earn the Biotechnology Certificate carry prerequisites that must be met before enrolling.
2. All courses used to satisfy the requirements for the Certificate must be completed within a five-year period.
3. You must contact the Biotechnology Certificate faculty advisor (Dr. Chris Miller (chris.miller@ucdenver.edu)) no later than the start of the semester of graduation in order for the certificate recognition to appear on your transcripts.

Code	Title	Hours
Complete all of the following required courses courses:		*15*
BIOL 3124	Introduction to Molecular Biology	
BIOL 4024	Introduction to Biotechnology	
BIOL 4125	Molecular Biology Laboratory	
BIOL 3939	Internship	
or BIOL 4880	Directed Research	
CHEM 3810	Biochemistry	
or CHEM 4820	General Biochemistry II	
Complete one elective from among those listed below, or a course pre-approved by the Biotechnology Certificate faculty advisor:		*2*

BIOL 3612	Cell Biology Laboratory
BIOL 3763	Biostatistics
BIOL 4055	Virology
BIOL 4064	Cell Biology of Disease
BIOL 4134	Human Genetics
BIOL 4144	Medical Microbiology
BIOL 4225	Genomics and Bioinformatics
BIOL 4622	Topics in Immunology
BIOL 4634	Biology of Cancer
CHEM 3111	Analytical Chemistry
CHEM 4121	Instrumental Analysis
CHEM 4828	Biochemistry Lab
CHEM/BIOL 4835	Biochemistry of Gene Regulation and Cancer
Total Hours	**17**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/integrative-biology/academics/certificates/#biotechnology_certificate-93).

Environmental Stewardship of Indigenous Lands Undergraduate Certificate

Introduction

The Environmental Stewardship of Indigenous Lands (ESIL) certificate is an exciting educational opportunity at the University of Colorado Denver (CU Denver), where Indigenous comprises the terms Native American, American Indian, Alaskan Native, and Hawaiian Native. The ESIL certificate provides a unique training opportunity for students to combine a passion for protecting natural resources with a desire to communicate across diverse cultures and schools of thought. This unique program provides training, internships, and job placement for students interested in environmental issues involving tribal and non-tribal entities.

This certificate is available to full-time and part-time undergraduate students; post-baccalaureate students; and transfer students. Students from CU Denver and other institutions are invited to participate. While the certificate is open to students from all educational backgrounds, ESIL targets students majoring in science, technology, engineering, and mathematics (STEM).

Additionally, the ESIL certificate incorporates professional training through extracurricular activities and internships. The extracurricular activities provide students with culturally relevant exposure to topics such as tribal independence, environmental law, transcultural competency, and traditional ecological knowledge (TEK). Both the STEM curriculum and culturally relevant knowledge are applied during internships in which students practice facilitation as tribal liaisons with partner organizations.

The ESIL program is offered at the undergraduate level.

ESIL Academic Advisors

- Dr. David Mays (David.Mays@ucdenver.edu) in the Department of Civil Engineering
- Dr. Rafael Moreno-Sanchez (Rafael.Moreno@ucdenver.edu) in the Department of Geography and Environmental Sciences
- Dr. Timberley Roane (Timberley.Roane@ucdenver.edu) in the Department of Integrative Biology

Program Delivery

- This program is available with on-campus, online, and off-campus components. More information on delivery opportunities can be obtained from one of the ESIL certificate advisors.

Declaring This Certificate

Admission Requirements:

Students must officially declare their interest in enrolling in the ESIL certificate program following the link at https://clas.ucdenver.edu/esil/.

Upon enrollment in the ESIL certificate program, students participate in the ESIL program activities, complete at least one ESIL internship, and take the ESIL coursework. In addition to the certificate requirements, students are also required to complete any STEM courses identified by the ESIL program director.

Eligibility:

Students in any discipline are eligible for admission in the certificate. Students from a non-STEM background may have to complete STEM coursework to meet the STEM expectations of the certificate.

These program requirements are subject to periodic revision by the ESIL certificate advisors. Exceptions and substitutions for individual cases will be made by ESIL advisors only. Students in the ESIL program are required to meet with their assigned advisor before the start of each semester to confirm best plans of study.

General Requirements

Students must satisfy all requirements as outlined below.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours of approved courses.
2. Students must complete a minimum of six upper division level (3000-level and above) credits from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete a minimum of 12 credit hours of approved coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. It is expected that students have a STEM background for completion of the certificate. For most STEM students, the STEM degree serves as the background needed. For non-STEM students, additional certificate related STEM coursework may be required. For the certificate recognition to appear on the student's transcript, students must meet all curricular and co-curricular requirements and meet with an ESIL advisor no later than the start of the semester of graduation.
2. Students must be enrolled in one course per year to maintain active status in the certificate program.
3. Participation is required in ESIL workshops and seminars.
4. ESIL internships are designed to expose students to the professional practice of facilitation and offer important connections and networking opportunities directly with agencies who hire tribal liaisons. Assignment and completion of the internship must be pre-approved by an ESIL advisor. The ESIL certificate requires a written report and presentation to demonstrate proficiency for each internship. The ESIL certificate requires at least one internship through the ESIL program. All students must work with their ESIL advisor for the placement in the required ESIL internship. Some majors may allow students to earn and apply internship credit toward their degree.
5. The ESIL certificate requires the courses listed below. Each course applied to the ESIL certificate may carry prerequisites that must be met prior to course enrollment.

Required courses

Code	Title	Hours
Complete one of the following courses with guidance from an ESIL advisor:		*3*
BIOL 3763	Biostatistics	
CVEN 3611	Engineering Statistics	
CVEN 5381	Introduction to Geographic Information Systems	
GEOG 4080	Introduction to GIS	
MATH 2830	Introductory Statistics	
MATH 4830	Applied Statistics	
All students must complete an ESIL approved internship or equivalent coursework. [1]		*3*
BIOL 3939	Internship	
GEOG 3939	Internship	
Complete two of the following elective courses:		*6*
COMM 3271	Communication and Diversity [2]	
ETST 3036	American Indian Cultural Images [2]	
ETST 3110	Indigenous Studies	
MGMT 4100	Leveraging Diversity and Inclusion in Business [2]	
PSCI/ETST 4144	Indigenous Political Systems	
PSCI/ETST 4146	Indigenous Politics	
Total Hours		**12**

1 Students must work in advance with their ESIL advisor to have their internship and other coursework approved.
2 These courses fulfill the core curriculum requirement for cultural diversity.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/esil/learning-outcomes/).

Interdisciplinary Programs

Overview

Interdisciplinary programs encourage students to synthesize the theories, methods and analytical perspectives of diverse disciplines to bring new ways of understanding to particular themes or problems. Interdisciplinary studies foster research and teaching collaboration among faculty and students, who cross traditional academic specialties. Interdisciplinary programs also place a high value on reaching beyond the university into our local, national and global communities, providing students with real-world experiences through internships and experiential learning.

The college also has several established interdisciplinary programs leading to full undergraduate degrees, minors, certificates and graduate degrees. A brief description of each program follows, with a link to its respective program section.

Information

- Health is one of the fastest growing industries in the US and the Bureau of Labor Statistics has projected increasing demand and labor shortages for at least the next ten years. The CU Denver (p. 865)**Post-Baccalaureate Allied and Professional Health Sciences Certificate** was developed as an opportunity for the many students who already have a bachelor's degree and want to shift their career into this large and fast growing industry to improve employment opportunities and potential earnings.
- The increasing prominence of China in world affairs has made knowledge of Chinese language and cultures an asset in numerous fields. The innovative Minor in Chinese Studies (p. 721) offers a specialized study of China through coursework in the related disciplines of language, anthropology, history, geography, literature and political science.
- The Civics, Public Policy and Equity (p. 871) is designed to help students from any disciplinary major develop competencies and skills regarding United States civics from diverse perspectives. The certificate provides students with many course options to complete introductory and advanced coursework tailored to their individual interests. This certificate promotes civic engagement and participation in the political process.
- The explosive growth in data collection over the past 10 years is unlikely to slow any time soon. This has created a dramatic increase in demand for individuals who can understand how to make decisions and predictions in the context of uncertainty through use of experimental design, statistical methods, and programming, especially in the context of large data sets. This need spans many fields such as environmental applications of climate modeling over space and time, medical and genomic applications that use electronic medical records to correlate demographics, genetic data, and clinical outcomes over millions of individuals, national security applications (including real-time monitoring of internet trends), and manufacturing with real-time monitoring of features over a variety of processes to both troubleshoot and optimize manufacturing. Graduates of the BS in Data Science (p. 630) will be well-positioned to meet this need.
- From social media and mobile phones to the algorithms in self-driving cars, digital and information technologies are everywhere. The Digital Studies Certificate (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/clas-iinterdisciplinary-certificates/digital-studies-certificate/) provides students with the opportunity to investigate the relationships between new communication technologies and society and to develop skills creating digital media messages and products.
- The (p. 927)**K-12 Teacher Licensure Programs**, in collaboration with the School of Education & Human Development, enable students to add educational training to their liberal arts and sciences discipline studies. Students can also pursue a BA/BS to MA in Teaching.
- The Minor in Environmental Sciences (p. 528) allows students to choose courses from the social sciences, physical sciences, engineering, humanities and statistics to create a unique program of study.
- The Ethnic Studies BA (p. 498) and the Minor in Ethnic Studies (p. 499) provide students the opportunity, through academic investigation, to develop a greater understanding of the cultural pluralism of the present day United States and to acquire skills needed in professional and social service fields.
- The Individually Designed Major (IDMA) (p. 588) gives students an opportunity to design a major that meet their unique needs and interests. Students pursue studies that combine coursework from two, three, or even more academic units to explore a particular theme. The IDM challenges students to ask questions that require thinking beyond a single discipline. Students may choose either an **Interdisciplinary Studies** or an Integrated Health Studies (p. 593) option for this degree.
- The Integrated Studies (p. 598) BA (p. 599) and BS (p. 604) provide students with maximum flexibility and multiple pathways through the curriculum, to complete a degree, through the combination of two course clusters. These degrees are designed to help students integrate coursework from different programs, to design a novel major. They are especially helpful for students who have switched majors, colleges or institutions, and are looking for a meaningful way to complete their degree. Students may complete these degrees fully online, if they choose.
- In a world where global commerce and politics have emerged as driving forces, the International Studies Major (p. 639) and the International Studies Minor (p. 650) provide students with innovative perspectives on changes that affect all of us. INTS is designed to provide students a thorough education in international issues while preparing them for global careers. These programs offer students the opportunity to develop a deeper understanding of complex international issues and the forces that are shaping our world.
- The Minor in Health Humanities (p. 557) explores the ethical, cultural, social and political contexts of health and medicine, providing an excellent addition to science-based curricula serving as a stand-alone program that addresses many current issues of interest to the humanities and social sciences.
- The Humanities Minor (p. 586) cultivates humanistic exploration through historically grounded texts and traditions. It teaches critical engagement with society's most pressing issues by developing a human-oriented perspective in which creativity and critical, theoretical thinking frame ethical being in the world.
- The **Minor in Law Studies** is intended to help students become intelligent and critical scholars of legal and political discourse. While the minor may be useful for students contemplating law school, it is also intended to appeal to a wider group of students interested in issues relating to law and society and careers in public policy related fields.
- The Professional Skills Certificate (p. 875) certificate is designed for undergraduate students seeking to acquire and enhance diverse workplace skills that are highly valued by today's employers. Students

will learn to communicate effectively, write persuasively, and develop proficiency in digital and media literacy or data literacy.

- The **Public Health Majors** enable students to get either a BA or BS degree in public health, depending on their focus. They may choose from over 100 electives in 14 academic departments, in addition to specific public health core courses.
- Religion involves the worldview of a culture, its social norms, ethics, and politics. In the private realm, religious experiences are among the most profound an individual can have. The (p. 822)**Minor in Religious Studies** fosters a nuanced understanding of religion, and cultivates critical skills evaluating religious phenomena.
- The **Minor in Social Justice** encourages students to recognize how democracy, education, consumerism, media, race, class and gender intersect. The minor fosters the many ways that our students are already engaged as citizens, the desirable possibilities that remain unrealized and their power to effect that actualization.
- Holistic approaches to sustainability practices in our daily living require a workforce that understands the various perspectives that address a broad optimistic framework. Students who complete the **Minor in Sustainability** will demonstrate a command of the language, structure and skills of multiple, relevant disciplines, and will be better prepared to take leadership in this complex, challenging field.
- The (p. 859)**Minor in Women's and Gender Studies** focuses students' attention on the centrality of gender and sexuality to understanding our past and present worlds. Students and faculty probe assumptions about men and women, and question structures of inequality as they play out in local and global contexts.

Graduate Information

Please go to the **Graduate** catalog to read about our graduate programs

Programs

- Data Science, BS (p. 630)
- Liberal Arts and Sciences BA/BS, 4+1/ Teaching MA (p. 634)

Data Science, BS

Introduction

Please click here (p. 130) to see Business School information.

Please click here (p. 373) to see College of Liberal Arts and Sciences information.

Please click here (p. 293) to see College of Engineering, Design and Computing information.

The explosive growth in data collection over the past 10 years is unlikely to slow any time soon. This has created a dramatic increase in demand for individuals who can understand how to make decisions and predictions in the context of uncertainty through use of experimental design, statistical methods, and programming, especially in the context of large data sets. This need spans many fields such as environmental applications of climate modeling over space and time, medical and genomic applications that use electronic medical records to correlate demographics, genetic data, and clinical outcomes over millions of individuals, national security applications (including real-time monitoring of internet trends), and manufacturing with real-time monitoring of features over a variety of processes to both troubleshoot and optimize manufacturing. Graduates of the BS in Data Science will be well-positioned to meet this need.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 87 major credit hours, from approved courses.
2. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 upper-division level credit hours with CU Denver faculty.

Code	Title	Hours
Complete the following BUSN courses: [1]		*15*
BMIN 1000	Introduction to Business	
BMIN 2200	Career and Professional Development	
ISMG 3100	Data Governance and Ethics	
BANA 4110	Business Analytics Processes	
BANA 4120	Forecasting Techniques	
Complete the following CSCI courses: [1]		*27*
CSCI 2400	Data Structures and Program Design for Data Science	
CSCI 2800	Special Topics (Data Science Thinking)	
CSCI 3400	Databases for Data Science	
CSCI 3450	Algorithms for Data Science	
CSCI 4455	Data Mining	
CSCI 4580	Data Science	
CSCI 4930	Machine Learning	
CSCI 4931	Deep Learning	
CSCI 4951	Big Data Systems	
Complete the following MATH courses: [1]		*36*
MATH 1376	Programming for Data Science	
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 2700	Data Analysis with R and Other Tools	
MATH 2830	Introductory Statistics	
MATH 3191	Applied Linear Algebra	
MATH 3376	Data Wrangling & Visualization	
MATH 3382	Statistical Theory	
MATH 3810	Introduction to Probability	
MATH 4387	Applied Regression Analysis	
Complete nine credits of 4000-level application domain electives		*9*
Total Hours		**87**

[1] Courses are under development and may be subject to change. Students should meet with their advisor to check and confirm course registration.

The program's student learning goals that define what the students should know and be able to do by the time of graduation are to:

- *Math & Programming Skills:* Apply the math and programming skills necessary for the work of data science.
- *Data Cycle:* Explore technical and practical data science by applying the data cycle to transform data into knowledge.
- *Data Preparation:* Assess and improve the quality of data relative to analytical needs.
- *Data Management:* Address data challenges of volume, variety, and velocity to enable efficient and effective data analysis.
- *Data Analysis:* Apply techniques, methodologies, and technologies for various forms of data analysis such as data modeling and data mining.
- *Data Visualization:* Create visualizations of complex data and results for delivery to diverse audiences.

- *Data Storytelling:* Explain data and results in writing and verbally, equipping stakeholders to make data-informed decisions.
- *Data Ethics:* Assess ethical implications in data science, such as privacy and bias.
- *Application Domains:* Apply data science in a variety of domains, such as healthcare, social sciences, natural sciences, physical science, business, education, and public administration.
- *Interprofessional Collaboration & Teamwork:* Exhibit the qualities of an effective interprofessional collaborator as part of a data science team and within organizations with diverse roles.

Graduates will be able to demonstrate these capabilities in a broad range of data science activities. The degree will prepare students for careers as data analysts, data scientists, data strategist and many other diverse careers that rely on data, which is essentially every corner of the job market today.

The following plans of study are examples of pathways that students can follow, depending on their entry level MATH placement.

To review a list of courses will fulfill CU Denver Core Arts, Behavioral Science, Humanities and Natural and Physical Sciences with and without a lab, please check the CU Denver Core Curriculum. (p. 122)

Calculus I

Course	Title	Hours
Year 1		
Fall		
BMIN 1000	Introduction to Business	3
ENGL 1020	Core Composition I	3
MATH 1376	Programming for Data Science	3
MATH 1401	Calculus I	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Spring		
ENGL 2030	Core Composition II	3
CSCI 2800	Special Topics (Data Science Thinking)	3
MATH 2830	Introductory Statistics	3
MATH 2411	Calculus II	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Year 2		
Fall		
BMIN 2200 Career and Professional Development		3
CSCI 2400 Data Structures and Program Design for Data Science		3
ISMG 3100 Data Governance and Ethics		3
MATH 2421	Calculus III	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Spring		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
CU Denver Core Natural and Physical Sciences with a lab (p. 631)		4-5
CSCI 3400 Databases for Data Science		3
MATH 2700 Data Analysis with R		3
MATH 3376	Data Wrangling & Visualization	3
	Hours	**16-17**
Year 3		
Fall		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
MATH 3810	Introduction to Probability	3
CSCI 3450 Algorithms for Data Science		3
MATH 3191	Applied Linear Algebra	3
Open elective-student choice		3
	Hours	**15**
Spring		
Application Domain Elective		3
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
BANA 4110 Business Analytics Processes		3
CSCI 4580	Data Science	3
MATH 3382	Statistical Theory	3
	Hours	**15**
Year 4		
Fall		
Application Domain Elective		3
BANA 4120 Forecasting Techniques		3
CSCI 4455	Data Mining	3
CSCI 4931	Deep Learning	3
Open elective-student choice		3
	Hours	**15**
Spring		
Application Domain Elective		3
CSCI 4930	Machine Learning	3
CSCI 4951	Big Data Systems	3
MATH 4387	Applied Regression Analysis	3
	Hours	**12**
	Total Hours	**121-122**

Precalculus

Course	Title	Hours
Year 1		
Fall		
BMIN 1000	Introduction to Business	3
ENGL 1020	Core Composition I	3
MATH 1376	Programming for Data Science	3
MATH 1130	Precalculus Mathematics	4

Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Spring		
ENGL 2030	Core Composition II	3
CSCI 2800	Special Topics (Data Science Thinking)	3
MATH 2830	Introductory Statistics	3
MATH 1401	Calculus I	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Year 2		
Fall		
BMIN 2200 Career and Professional Development		3
CSCI 2400 Data Structures and Program Design for Data Science		3
ISMG 3100 Data Governance and Ethics		3
MATH 2411	Calculus II	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Spring		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
CSCI 3400 Databases for Data Science		3
MATH 2700 Data Analysis with R		3
MATH 2421	Calculus III	4
MATH 3376	Data Wrangling & Visualization	3
	Hours	**16**
Year 3		
Fall		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
MATH 3810	Introduction to Probability	3
CSCI 3450 Algorithms for Data Science		3
MATH 3191	Applied Linear Algebra	3
CU Denver Core Natural and Physical Sciences with a lab (p. 631)		4-5
	Hours	**16-17**
Spring		
Application Domain Elective		3
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
BANA 4110 Business Analytics Processes		3
CSCI 4580	Data Science	3
MATH 3382	Statistical Theory	3
	Hours	**15**
Year 4		
Fall		
Application Domain Elective		3
BANA 4120 Forecasting Techniques		3
CSCI 4455	Data Mining	3
CSCI 4931	Deep Learning	3
Open elective-student choice		3
	Hours	**15**
Spring		
Application Domain Elective		3
CSCI 4930	Machine Learning	3
CSCI 4951	Big Data Systems	3
MATH 4387	Applied Regression Analysis	3
	Hours	**12**
	Total Hours	**122-123**

Algebra

Course	Title	Hours
Year 1		
Fall		
BMIN 1000	Introduction to Business	3
ENGL 1020	Core Composition I	3
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
MATH 1110	College Algebra	4
MATH 2830	Introductory Statistics	3
	Hours	**16**
Spring		
ENGL 2030	Core Composition II	3
CSCI 2800	Special Topics (Data Science Thinking)	3
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
MATH 1120	College Trigonometry	3
MATH 1376	Programming for Data Science	3
	Hours	**15**
Summer		
MATH 1401	Calculus I	4
	Hours	**4**
Year 2		
Fall		
BMIN 2200 Career and Professional Development		3
CSCI 2400 Data Structures and Program Design for Data Science		3
ISMG 3100 Data Governance and Ethics		3
MATH 2411	Calculus II	4
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
	Hours	**16**
Spring		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
CSCI 3400 Databases for Data Science		3
MATH 2700 Data Analysis with R		3
MATH 2421	Calculus III	4
MATH 3376	Data Wrangling & Visualization	3
	Hours	**16**

Year 3		
Fall		
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
MATH 3810	Introduction to Probability	3
CSCI 3450 Algorithms for Data Science		3
MATH 3191	Applied Linear Algebra	3
CU Denver Core Natural and Physical Sciences with a lab (p. 631)		4-5
	Hours	**16-17**
Spring		
Application Domain Elective		3
Core Arts, Humanities, Social Science, Behavioral Science, International Perspectives or Cultural Diversity (p. 631)		3
BANA 4110 Business Analytics Processes		3
CSCI 4580	Data Science	3
MATH 3382	Statistical Theory	3
	Hours	**15**
Year 4		
Fall		
Application Domain Elective		3
BANA 4120 Forecasting Techniques		3
CSCI 4455	Data Mining	3
CSCI 4931	Deep Learning	3
	Hours	**12**
Spring		
Application Domain Elective		3
CSCI 4930	Machine Learning	3
CSCI 4951	Big Data Systems	3
MATH 4387	Applied Regression Analysis	3
	Hours	**12**
	Total Hours	**122-123**

Liberal Arts and Sciences BA/BS, 4+1/ Teaching MA

Introduction

Are you planning on teaching after graduation? The College of Liberal Arts and Sciences (CLAS) has partnered with the School of Education & Human Development (SEHD) to enable CU Denver undergraduates to get a jumpstart on their teaching careers. When you join the minor in Teacher Education (p. 954), you gain access to a 4+1 program that helps you earn your CLAS degree (p. 374), a Master's in Teaching (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/teacher-education/teaching-ma/#text), (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/teacher-education/teaching-ma/#degreerequirementstext) and would qualify for a Colorado Teaching License in five years.

The School of Education & Human Development (p. 876) at the University of Colorado Denver attracts students who are passionate about education and mental health. We match their passion with an education that is rooted in diversity, technology, proven approaches and real-world practice. That's why our graduates are prepared to make immediate and life-long impacts on people, communities and the world.

The minor in Teacher Education purposefully integrates fieldwork and coursework. It is designed to grow your teaching skills and knowledge to serve all students' learning.

This minor pairs nicely with a range of CLAS majors including Biology, Communication, English, Environmental Science, Ethnic Studies, Geography, History, Mathematics, Political Science, Psychology, Sociology, and Spanish.

The content of your bachelor's degree must match the teacher licensure area you want to pursue in the master's degree (e.g., a science-related degree for teaching secondary science).

Program Delivery

- This is a blended program with courses offered online, on campus, hybrid, and remote.

Declaring This Program

- Click here (p. 380) to go to information about declaring a major.
- Please meet with an undergraduate advisor in SEHD early on to ensure your major is aligned to the teaching license you are seeking.
  - Please contact#academic advisor Danielle Peralta (Danielle.Peralta@ucdenver.edu). For more information, email academicservices@ucdenver.edu# or call 303.315.6300.
- Students may sign up for the minor as early as sophomore year. Declare the minor by contacting the SEHD Academic Advisor Danielle Peralta (Danielle.Peralta@ucdenver.edu).

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn this degree, students must satisfy all requirements for their chosen CLAS Bachelor's degree, (p. 374) complete the Teacher Education minor (p. 954) and fulfill the individual requirements for your their Master of Arts in Teaching (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/teacher-education/teaching-ma/) (MAT)
2. Up to nine credits of the Teacher Education minor will be taken at the graduate level and apply to both the minor and the chosen MAT.
3. Students will complete an additional 27- 39 credits to finish the MAT degree.
4. Students must select and apply to their chosen MAT during the semester stated in the requirements below.
5. The process includes an essay, letters of recommendation, and an interview.
6. A 3.0 GPA and good standing in the program are required for admission.
7. Students must maintain a minimum 3.0 cumulative grade point average and receive a B- or better in all coursework.

Complete a CLAS major and the following Teacher Education Minor requirements:

General Requirements

The Teacher Education Minor is combined with an existing non-SEHD major and degree. Students must satisfy all requirements as outlined below, and those of the School of Education & Human Development applicable to the minor.

In this 4+1 pathway, students will be required to

- Minor in Teacher Education with the required courses taken during their undergraduate program
- Apply into the Master of Arts in Teaching (https://education.ucdenver.edu/academics/graduate/teaching/#MAT) SEHD program during semester two of the minor
- Graduate with their undergraduate degree
- Complete the one-year Masters of Teaching program which will also make them eligible for the appropriate Colorado teaching license

Click here (p. 878) for information about the School of Education & Human Development Academic Policies.

Program Requirements

Students must complete the 15 credits below in the order established with a minimum grade B- or better. An overall minimum of 3.0 is required for this minor. (Consult with a SEHD advisor for timing and specific requirements of this minor.)

Please contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or academicservices@ucdenver.edu for an appointment to discuss and plan your route through the Teacher Education Minor. The sequence of the courses required might vary depending on licensure.

Code	Title	Hours
Semester One (of the Minor) Courses:		*6*
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	
EDHD 2930	Learning & Development Field Experience & Seminar	
Semester Two (of the Minor) Course:		*3*
CLDE 5020	Responsive Classroom Communities	
Apply to the Masters of Teaching Program		
Semester Three (of the Minor): Choose One General Course Applicable to Licensure		*6*
Math, Science, Social Studies, English, Spanish, French, Special Education		
SPED 5030	Understanding (dis)Ability in Contemporary Classrooms	
Elementary		
LCRT 5710	Primary Literacy for Diverse Learners, Pre K-Grade 3	
AND Choose One Content Course Applicable to Licensure		
Math-		
MTED 5621	A World of (Different) Numbers: Quantity and Operation	
MTED 5622	Expanding Conceptions of Algebra	
MTED 5623	Geometrical Ways Of Reasoning	
Science-		
SCED 5500	The Nature of Science	
or SCED 535	Issues and Trends in Science Education	
Social Studies, English, Spanish, French-		
LCRT 5720	Writing Development, Instruction and Assessment	
Elementary & Special Education-		
MTED 5400	Mathematics for Elementary Teachers	
Total Hours		**15**

Pathway Layout

- Complete an undergraduate major in CLAS.
  - To review Degree Maps for CLAS majors, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)
- Minor in Teacher Education with the required courses taken during your undergraduate program
- Apply into the Master of Arts in Teaching (https://education.ucdenver.edu/academics/graduate/teaching/#MAT) SEHD program during semester two of the minor
- Graduate with your CLAS undergraduate degree
- Complete the one-year Masters of Teaching program which will also make you eligible for the appropriate Colorado teaching license

International Studies

Overview

In a world where the forces of politics, commerce, culture, and technology are multifaceted and interconnected, the International Studies (INTS) major provides students with a much-needed global perspective. INTS is an interdisciplinary liberal arts degree that prepares students for international careers and graduate study. The INTS major offers students a deep understanding of complex international issues and the underlying drivers that are shaping our world. Employers seek the qualities of INTS graduates: historical knowledge, research ability, cross-cultural competence, teamwork and leadership experience, and the ability to analyze, model, and solve real-world problems. According to the National Association of Colleges and Employers (NACE), International Studies graduates earn higher starting salaries than any other social science major, except Economics. The INTS major provides students with the methodological tools necessary to analyze various regions of the world and global issues from different academic disciplines. Students take courses from departments including Anthropology, Business, Communication, Economics, Geography, History, Modern Languages, Political Science, and Religious Studies, among others. This combination of coursework, flexibility, and customization provides INTS majors a distinctive and valuable degree for today's world.

Undergraduate Information

Click here (p. 639) for information about the requirements for the Major in International Studies.
Click here (p. 650) for information about the requirements for the Minor in International Studies.

Joint BA/MA Programs

Highly-motivated students with strong GPAs in the INTS major may qualify for admission to a combined BA/MA program, with the BA in International Studies and MA in Political Science (PSCI) or Humanities or Social Science (MHMSS). This condensed graduate degree program allows students to double-count 5 graduate-level courses toward the BA and MA simultaneously and to complete the MA degree with only one extra year of coursework. Interested students should contact advisors in both the INTS program and Political Science or the Masters in Humanities or Masters in Social Science program to learn more about specific course plans and requirements. Note: Students who are approved to begin a joint BA/MA program must still apply to and be accepted by their chosen graduate program.

Click here (p. 648) for information about the requirements for the 4+1 BA in International Studies to MH or MSS.
Click here (p. 646) for information about the requirements for the 4+1 BA in International Studies to PSCI MA.

Programs

- International Studies, BA (p. 639)
- International Studies, 4 + 1 BA/ Political Science, MA (p. 646)
- International Studies, 4 + 1 BA/ Humanities, MH or Social Sciences, MSS (p. 648)
- International Studies Minor (p. 650)

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The International Studies program is an interdisciplinary major with faculty drawn from several independent academic departments. Check the program website for more details.

The international studies program is an interdisciplinary major with 100+ courses drawn from multiple academic departments. Below are only courses that have a distinct International Studies program (INTS) course subject code.

International Studies (INTS)

INTS 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

INTS 2020 - Foundations of International Studies (3 Credits)
Through a combination of lecture, discussion, and hands-on learning activities, students will develop skills and abilities necessary for academic and professional success in the international studies arena, especially critical thinking, connection building, conceptual understanding, and cultural awareness. The course is structured in three phases: (1) core interdisciplinary concepts; (2) regional foci; and (3) global issues. Note: Students may not receive credit for INTS 2020, if they have already received credit for INTS 2000. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

INTS 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

INTS 3939 - Internship (1-6 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

INTS 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, ETST 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

INTS 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with COMM 4152, RLST 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTS 4611 - Rhetoric of Global Food Policy (3 Credits)
This course examines stakeholder relations, agendas, and debates about global food policy using rhetorical concepts and analysis. Topics include the framing of debates about agriculture, hunger and obesity, the greening of food governance, sustainable food systems, and more. This course fulfills the communication department's pathway course requirement. Cross-listed with COMM 4611. Prereq: Junior standing or higher. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

INTS 4700 - Special Topics (3 Credits)
Note: May be taken more than once for credit when topics vary. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

INTS 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of international studies. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

INTS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

INTS 4990 - International Studies Capstone (3 Credits)
A capstone course for students in the International Studies major, the class is designed to facilitate independent student research in the field of international studies and assist students in developing advanced writing and communication skills. Prereq: Students in the course must be declared international studies majors in their final year of coursework (senior status is recommended preparation). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to International Studies Majors only
Typically Offered: Fall.

INTS 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with INTS 5995. Term offered: Fall, Spring, Summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Fall, Spring, Summer.

International Studies, BA

Introduction

Please click here (p. 636) to see International Studies department information.

In a world where the forces of politics, commerce, culture, and technology are multifaceted and interconnected, the International Studies major provides students with a much-needed global perspective. International Studies is an interdisciplinary liberal arts degree that prepares students for international careers and graduate study. The International Studies major offers students a deep understanding of complex international issues and the underlying drivers that are shaping our world. Employers seek the qualities of International Studies graduates: historical knowledge, research ability, cross-cultural competence, teamwork and leadership experience, and the ability to analyze, model, and solve real-world problems. The INTS major provides students with the methodological tools necessary to analyze various regions of the world and global issues from different academic disciplines. Students can take courses from departments including Anthropology, Business, Communication, Economics, Ethnic Studies, Geography, History, Modern Languages, Political Science, and Religious Studies, among others. This combination of coursework, flexibility, and customization provides International Studies majors a distinctive and valuable degree for today's world.

Degree requirements are subject to periodic revision by the academic program, and the College reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

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Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 48 credit hours from the approved courses.
2. Students must complete a minimum of 24 upper-division (3000-level and above) credit hours in the major from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 24 credit hours with CU Denver faculty from the approved courses.

Program Restrictions, Allowances and Recommendations

1. Program Honors = 3.5 GPA within the major.
2. Students may use up to six internship credits toward international studies graduation requirements.
3. Students may use up to six credits of independent study toward international studies graduation requirements.
4. Up to two 2000 level or above Modern Language courses, not taught in English, may be counted as electives.
5. Students are strongly encouraged to reach proficiency in a second language, beyond the CLAS second language proficiency requirement. Students may take proficiency tests in languages to document existing language skills. Non-native English speakers may use English for their language proficiency.
6. Students are strongly encouraged to complete a High Impact Practice course, INTS 3939 Internship, INTS 4840 Independent Study, INTS 4880 Directed Research or any travel study or study abroad experience.
7. Students majoring in International Studies may choose MATH 1010 Mathematics for the Liberal Arts or MATH 2830 Introductory Statistics to complete their general education math requirement.

Code	Title	Hours
Complete the following introductory courses:		*12*
ANTH 2102	Culture and the Human Experience	
or COMM 4720	Dynamics of Global Communication	
ECON 2012	Principles of Economics: Macroeconomics	
or INTB 3000	Global Perspectives	
INTS 2020	Foundations of International Studies	
PSCI 3022	Political Systems of the World	
or PSCI 3042	World Politics	
Complete one of the following regional History courses:		*3*
HIST/ETST 3350	Colonial Latin America	
HIST 3451	Introduction to African History	
HIST 3460	Modern Latin American History	
HIST 3470	Intro to East Asia: Since 1800	
HIST 3480	Introduction to European History	
HIST 3500	African History in Novels and Films	
HIST 4083	Russia Since 1917	
HIST 4086	Eastern Europe	
HIST/CHIN 4421	Modern China	
HIST 4431	Modern Japan	
HIST 4461	The Modern Middle East	
Complete the International Studies Capstone in the final year of the program.		*3*
INTS 4990	International Studies Capstone [1]	
Complete 30 elective credit hours drawn from internationally themed courses. A minimum of 24 credits must be upper-division (3000 or 4000 level). Students must take courses in at least two different disciplines (subject codes). [2]		*30*
Students may complete any two courses from Modern Languages at 2000 level or above that are not taught in English.		
The list below is representative of courses that will apply to the major. Various Global Education/Study Abroad courses may not appear on the approved list of courses. Please consult with an International Studies advisor for current offerings.		
ANTH 3000	Globalization, Migration and Transnationalism	
ANTH 3121	Language, Culture, and Communication	
ANTH 3142	Cultural Diversity in the Modern World	
ANTH/PBHL 3200	Human Migration: Nomads, Sojourners, and Settlers	
ANTH 4010	Medical Anthropology: Global Health	
ANTH/PBHL 4080	Global Health Practice	
ANTH/PBHL 4090	Psychedelic Anthropology	
ANTH 4200	Gender in Cross-Cultural Perspective	
ANTH 4230	Fieldwork Methods	
ANTH 4300	Migrant Health	
ANTH 4320	Archaeology of Mexico and Central America	
ANTH 4350	Anthropology of Globalization	
CHIN 2970	Contemporary Chinese Cinema	
CHIN 3200	Contemporary Chinese Society and Culture	
CHIN 3300	Special Topics on Chinese Film	
CHIN 3840	Independent Study: CHIN	
CHIN 3995	Global Study Topics	
CHIN 4880	Directed Research	
COMM 3230	Chinese Communication & Culture in Context	
COMM 3271	Communication and Diversity	
COMM 4020	Feminist Perspectives on Communication	
COMM/INTS/RLST 4152	Religion & Communication	
COMM 4270	Intercultural Communication	
COMM 4430	Communication, China, and the US	

COMM 4601	You Are What You Eat: Food as Communication
COMM 4720	Dynamics of Global Communication
CMDT 4582	Commodity Supply Chain Management
CMDT 4682	Commodity Valuation and Hedging
CMDT/FNCE 4802	Foundations of Commodities
ECON 3400	Economics of Sex and Drugs
ECON 3415	Issues in International Trade and Finance
ECON 3770	Issues in Economic Development
ECON 4081	Intermediate Macroeconomic Theory
ECON 4410	International Trade
ECON 4420	International Finance
ECON 4530	Economics of Natural Resources
ECON 4540	Environmental Economics
ECON 4770	Development Economics
EDFN 3000	Undocumented Mexican Immigration
ENGL 3080	Global Cinema
ENGL 3798	International Perspectives in Literature and Film
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (topic must be approved by International Studies advisor)
ENGL 4460	Contemporary World Literature
ENGR 3600	International Dimensions of Technology and Culture
ENGR 3995	Global Technology, Business & Culture
ETST 3108	Chicano/a and Latino/a History
ETST 3110	Indigenous Studies
ETST 3129	Contemporary Latin American Literature
ETST 3272	Global Media
ETST/SOCY 3697	Contemporary Asian American Experience
ETST 3704	Culture, Racism and Alienation
FINE 4610	Pre-Columbian Art
FINE 4630	History of Latin American Art:1520-1820
FINE 4715	Islamic Art and Architecture
FINE 4730	Arts of Japan
FINE 4750	Arts of China
FINE 4770	Art of India and Southeast Asia
FITV 3550	World Theatre
FNCE 3000	Principles of Finance
FNCE 3600	Financial Markets and Institutions
FNCE/INTB 4370	International Financial Management
FREN 3112	Survey of French Literature I
FREN 3120	French Cultural Identities: Myths and Realities
FREN 3122	Survey of French Literature II
FREN 3130	Current Topics of the French-Speaking World
FREN 3140	Contemporary Francophone Cultures
FREN 3200	The Francophone World in the Post-Colonial Era
FREN 4200	French Civilization Through the Nineteenth Century
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries
FREN 4430	Nineteenth Century French Novel
FREN 4480	Twentieth Century French Novel
FREN 4490	Twentieth Century French Theater
FREN 4510	French Women Writers
FREN 4520	Voices of Haiti and the Caribbean
FREN 4600	History of the French Language

GEOG 3120	Geography of Europe
GEOG 3130	Central America and the Caribbean
GEOG 3140	Geography of South America
GEOG 3160	Geography of China
GEOG 3401	Geography of Food and Agriculture
GEOG 3412	Globalization and Regional Development
GEOG 3430	Geography of Tourism
GEOG 4265	Sustainability in Resources Management
GEOG 4301	Population, Culture, and Resources
GEOG 4305	Water Quality and Resources
GEOG 4335	Contemporary Environmental Issues
GEOG 4420	The Politics of Nature
GEOG 4710	Disasters, Climate Change, and Health
GEOG 4720	Climate Change: Causes, Impacts and Solutions
GRMN 3200	Current German Society and Culture
HIST/INTS/ETST/PHIL/RLST 3003	From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence
HIST 3121	The World at War, 1914-1945
HIST 3232	The American Colonies to 1750
HIST 3345	Immigration and Ethnicity in American History
HIST/ETST 3350	Colonial Latin America
HIST 3364	Native Americans and Spaniards in North America
HIST 3451	Introduction to African History
HIST 3460	Modern Latin American History
HIST 3470	Intro to East Asia: Since 1800
HIST 3480	Introduction to European History
HIST 3500	African History in Novels and Films
HIST 3616	Global History of Energy
HIST 3706	Age of Revolution
HIST/INTS/CHIN/RLST/ETST 4002	Race, Gender and Religious Nationalisms in Asia and the US
HIST 4027	Enlightenment and Revolution
HIST 4028	Nations and Classes: 19th Century Europe
HIST 4029	Age of Anxiety in Europe
HIST 4032	Globalization in World History Since 1945
HIST 4046	Victorians and Victorianism
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.
HIST 4062	Modern France, 1789 to the Present
HIST 4071	Modern Germany
HIST 4074	Post-War Germany
HIST 4083	Russia Since 1917
HIST 4086	Eastern Europe
HIST 4220	U.S. Foreign Policy Since 1912
HIST/WGST 4303	Sex and Gender in Modern Britain
HIST/WGST 4345	Gender, Science, and Medicine: 1600 to the Present
HIST 4348	Mind and Malady: A History of Mental Illness
HIST/ETST 4411	Modern Mexico
HIST 4414	Nationalism and State Building in Latin America, 1750-1850
HIST 4415	Social Revolutions in Latin America
HIST 4416	The Age of Imperialism
HIST 4417	Commodities and Globalization
HIST 4420	Traditional China: China to 1600

HIST/CHIN 4421	Modern China
HIST 4431	Modern Japan
HIST 4451	Southern Africa
HIST 4455	African Struggle for Independence
HIST 4461	The Modern Middle East
HIST 4462	Islam in Modern History
HIST 4471	The Second World War
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation
HIST 4475	The Vietnam War
HIST 4490	Weapons of Mass Destruction
HIST 4621	Explorers and Exploration
HIST 4622	Oceans In History
INTB 3000	Global Perspectives
INTB/ENTP 4028	Global Study Topics
INTB/MGMT 4400	Environments of International Business
INTB/MGMT 4410	Operations of International Business
INTB 4950	Special Topics in International Business
INTS 3939	Internship
INTS 4840	Independent Study
INTS 4880	Directed Research
LING 3100	Language in Society
MGMT 3830/4830	Business and Sustainability
MGMT/MKTG 4834	London Calling: Global Sports & Entertainment Management
MKTG/INTB 4200	International Marketing
MKTG 4220	Asian Business Development and Marketing
MKTG 4580	International Transportation
PBHL 3041	Health, Culture and Society
PBHL 3070	Perspectives in Global Health
PBHL 3071	Global Topics In Sexual and Reproductive Health
PBHL 4020	Global Health: Comparative Public Health Systems
PBHL 4200	The Global HIV/AIDS Epidemic
PHIL 3280	War and Morality
PHIL 3430	How to think green: Environmental Ethics
PHIL 3500	Ideology and Culture: Racism and Sexism
PHIL 4341	Latin American Philosophy
PSCI 3022	Political Systems of the World
PSCI 3042	World Politics
PSCI 3050	Islamophobia
PSCI 3914	The Urban Citizen
PSCI 4025	Local Governance and Globalization
PSCI 4057/RLST 4500	Religion and Politics
PSCI 4085	Comparative Governance: Environment and Society
PSCI 4105	Comparative Politics: Europe
PSCI 4115	Third World Politics
PSCI 4126	Politics, Power, and Profit
PSCI/ETST 4144	Indigenous Political Systems
PSCI/ETST 4146	Indigenous Politics
PSCI/WGST 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism
PSCI 4155	Political Systems of the Middle East and North Africa
PSCI/ETST 4156	The Arab-Israeli Peace Process
PSCI 4165/RLST 3100	Islamic Politics and Culture
PSCI 4176	Civil Resistance in Theory and Practice

PSCI 4185	Corruption in the U.S. and Abroad
PSCI 4186	East Asia in World Affairs
PSCI 4195	Political Systems of Sub-Saharan Africa
PSCI 4206	Social Movements, Democracy and Global Politics
PSCI 4207	Theories of Social and Political Change
PSCI/WGST 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4216	International Politics: Human Rights
PSCI 4224	Dictatorships in 21st Century
PSCI 4225	Democracy and Democratization
PSCI 4226	The United Nations in World Affairs
PSCI 4235	Politics and Markets in Latin America
PSCI 4236	American Foreign Policy
PSCI 4237	American National Security
PSCI 4240	International Security
PSCI/WGST 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4266	International Law
PSCI 4276	Conflicts and Rights in International Law
PSCI 4280	The Politics of War Law
PSCI 4286	International Relations: War or Peace?
PSCI 4326	Advanced International Political Economy: Globalization
PSCI 4354	Environmental Politics
PSCI 4365	Global Ecological Crises
PSCI 4437	Coercion and the State
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4535	Labor and Working Class Politics
PSCI 4545	Immigration Politics
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4645	Comparative Political Leadership
PSCI 4770	Middle East Politics and Society in Film
PSCI 4726	Seminar on U.S. and China Relations
PSCI 4736	The Middle East in World Affairs
PSCI 4807	Political Violence
PSCI 4808	Strategies of Peacebuilding
PSCI 4878	War, Film, and International Law
RLST 3000	Judaism, Christianity and Islam: Affinity and Difference
RLST 3120	Islamic Traditions
RLST/PHIL 3410	Asian Philosophies and Religions
RLST 3500	Religions of India
RLST 3660/PHIL 3981	Chinese Philosophy and Culture
SOCY 3720	Global Perspectives on Social Issues
SPAN 3101	Introduction to the Study of Literature
SPAN 3199	Topics in Spanish Literature
SPAN 3212	Spanish American Culture and Civilization
SPAN 3213	Contemporary Latin American Culture and Institutions
SPAN 3221	Culture and Civilization of Spain I
SPAN 3222	Culture and Civilization of Spain II
SPAN 3223	Contemporary Spanish Culture and Institutions
SPAN 3225	Special Topics In Hispanic Culture
SPAN 3230	Ibero-American Cultures through Film

SPAN 3270	Bilingual Communities: Spanish as a Language of Contact
SPAN 3400	Survey of Spanish Literature I
SPAN 3410	Survey of Spanish Literature II
SPAN 3700	Spanish for International Business I
SPAN 3710	Spanish for International Business II
SPAN 3782	Introduction to Translation I
SPAN 3792	Introduction to Translation II
SPAN 4010	History of the Spanish Language
SPAN 4020	Spanish Sociolinguistics
SPAN 4060	Dialects of the Spanish-Speaking World
SPAN 4110	Contemporary Spanish Literature
SPAN 4130	Medieval Spanish Literature
SPAN 4150	Masterpieces of Spanish Literature
SPAN 4170	Golden Age Drama
SPAN 4180	Modernism
SPAN 4190	Nineteenth-Century Spanish Novel
SPAN 4300	Generation of 1898
SPAN 4320	Interculturalism and Transnationalism in Modern Spain
SPAN 4330	Modern Culture of Spain through Film and Narrative
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature
SPAN 4350	Don Quijote
SPAN 4360	Women and the Spanish Civil War
SPAN 4380	Romanticism in Spain
SPAN 4399	Special Topics: Spanish Peninsular Literature
SPAN 4501	Borges: An Introduction to His Labyrinths
SPAN 4512	Contemporary Argentine Short Stories
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial
SPAN 4522	Mexican Literature II: 19th to 21st Centuries
SPAN 4525	Orientalisms In The Hispanic Tradition
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema
SPAN 4550	Garcia Marquez: Words of Magic
SPAN 4590	Ibero-American Thought
Total Hours	**48**

[1] Students who are unable to complete INTS 4990 as the Capstone should consult with their major advisor and gain approval for an alternative option. Options to consider include: taking and completing HUMN/SSCI 5013 - Interdisciplinary Methods and Practice with a C- or higher; (b) completing an approved competitive internship with a C- or higher; (c) earning program honors with directed research; (d) participating in the United Nations summer course.

[2] Courses on international and global topics may come from Anthropology, Communication, Economics, Ethnic Studies, Geography, History, Political Science, or other departments. Pre-approved courses have been clustered by department to guide student selection. Other courses may be approved with permission of an International Studies program advisor. More recent course updates and thematic groupings of course may be found on the International Studies program website.

To learn more about the Student Learning Outcomes for this program, please visit our website.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

International Studies, 4 + 1 BA/ Political Science, MA

Introduction

The 4+1 accelerated Master's program in Political Science is an expedited program of study that allows students to complete a Bachelor's degree in International Studies and a Master's degree in Political Science in as few as 5 years. Students will follow the undergraduate curriculum for International Studies and work closely with their faculty advisor to begin taking Political Science graduate level coursework as they complete their undergraduate degree. They will complete no more than 15 credits as an undergraduate that will apply to both their undergraduate and graduate degrees. Students may officially declare their intent to complete this program in either their junior or senior year, and may apply to the graduate program during their senior year. Application requirements may differ from the traditional 2-year MA, which is why students need to work closely with faculty advisors and the political science graduate program director for more information and to ensure they are following the best track to complete coursework so that they only have one year after completing the undergraduate degree, to complete the graduate requirements.

Please click here (p. 636) to see International Studies program information.

Please click here (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/political-science/) to see Political Science department information.

Program Delivery

- This is an on-campus program.

Declaring this Program

Click here (p. 380) to go to information about declaring a major.

The INTS 4+1 BA/MA program is open to any INTS major who has reached junior-level status (completed 60-credit hours of coursework) with a GPA greater than 3.0. Students eligible to declare the INTS BA/MA degree program must be active CU Denver students who have competed at least one semester in residence at CU Denver, including at least two CU Denver PSCI courses.

In order to declare the INTS 4+1 BA/MA program prior to completion of the BA degree, interested students should consult with both the INTS undergraduate and PSCI graduate advisors. Students must complete a 4+1 BA/MA degree intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Completed 4+1 degree declaration forms are submitted to CLAS Advising for processing.

All students who have declared the 4+1 degree program option as undergraduates must submit a formal application through the CU Denver Graduate Admission's online application system during their final semester of undergraduate coursework. The department's preferred application deadlines are April 1 (summer term), May 1 (fall term), and November 1 (spring term).

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisors and CLAS advisor to confirm the best plans of study before finalizing them.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students will follow the undergraduate curriculum for International Studies (p. 639) and work closely with their faculty advisor to begin taking Political Science graduate level coursework as they complete their undergraduate degree.
2. A minimum of 48 undergraduate credit hours in the International Studies program and 33 graduate credits hours in Political Science must be completed to earn both an undergraduate and a graduate degree through this 4+1 program.
3. Up to 15 graduate level credit hours in Political Science may be taken by International Studies undergraduates accepted to the 4+1 program, and these credits will count both towards completion of the International Studies undergraduate degree, and the graduate degree in political science, if the student is later accepted into the graduate program. No more than 15 credit hours may "double-count" for the M.A.. Elective courses must be in accordance with Graduate Education Policies, therefore, meeting with an advisor regularly is recommended.
4. Students must complete a minimum of 24 upper-division (3000-level and above) credit hours and all graduate level credits with CU Denver faculty.
5. Students should officially declare their intent to complete this program by their junior year and apply to the graduate program during the semester they intend to graduate with their BA.
6. Students must earn a minimum grade of C- (1.7) in all undergraduate major courses taken at CU Denver and must achieve a minimum cumulative major GPA of 2.5.
7. Students must earn a minimum grade of B- (2.7) in any graduate level course for it to later be counted towards graduate degree requirements.
8. All graded attempts in required and elective courses are calculated in the major GPA. No course taken as P+/P/F or S/U may be counted.
9. To secure admission to the Political Science graduate program, submit formal graduate application during the senior year.
10. Application requirements may differ from the traditional 2-year MA, which is why students need to work closely with faculty advisors and the political science graduate program director for more information and to ensure they are following the best track to complete coursework so that they only have one year after completing the undergraduate degree, to complete the graduate requirements for Political Science (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/political-science/political-science-ma/).

To learn more about the learning outcomes for the International Studies undergraduate program, please visit our website.

To learn more about the learning outcomes for the Political Science graduate program, please visit our website (https://clas.ucdenver.edu/polisci/graduate/).

International Studies, 4 + 1 BA/ Humanities, MH or Social Sciences, MSS

Introduction

The International Studies BA/MHMSS (Master of Humanities/Master of Social Science Program) in the College of Liberal Arts and Sciences provides an expedited interdisciplinary program of study that allows participating students to complete an interdisciplinary Bachelor degree in International Studies and an interdisciplinary Master degree in Humanities or Social Science through the MHMSS program in five years. INTS students interested in participating in the combined degree apply no earlier than their first semester of junior-year standing as an undergraduate. Students may further choose to concentrate in one of the MH or MSS tracks. (For track information, see descriptions of the MH and MSS degree programs in the graduate catalog.) Upon acceptance, students take a maximum of 15 credit hours of graduate-level courses beginning the second semester of their junior year (or its equivalent) and through the whole of their senior year. Because these classes "double count," they fulfill requirements for both the BA major and the Master degree in Humanities or Social Science. Students then apply for admission to the MH or MSS program to continue graduate studies exclusively in the chosen degree plan, either MH or MSS, to complete their master degree by the end of their fifth year in CLAS at CU Denver.

All students who have declared the 4+1 degree program option as undergraduates must submit a formal application through the CU Denver Graduate Admission's online application system during their final semester of undergraduate coursework. The department's preferred application deadlines are April 1 (summer term), May 1 (fall term), and November 1 (spring term).

Please click here (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/humanities/) to see more information about the Humanities department.

Please click here (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/social-science/) to see more information about the Social Science department.

Please click here (p. 636) to see International Studies program information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisors and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Admissions Requirements and Process

- Interested students should contact their INTS advisor and the MH or MSS advisor as early as possible to ensure proper planning for the five year degree.
- Student and faculty will work together to submit an intent to complete the program form to CLAS Advising.
- To qualify, students must have a 3.0 or higher GPA in CLAS. All courses taken at the 4000- and 5000-level must be completed with at least a B or higher.
- To secure admission to the Master's in Humanities or Master's in Social Science graduate program, students must apply to the graduate program during the semester in which they will successfully complete their degree, and should have most of their general education and major requirements completed by this time.
- Application requirements may differ from the traditional 2 year MH/MSS, which is why students must work closely with faculty advisors and the Humanities or Social Sciences graduate program directors for more information and to ensure they are following the best track to complete coursework so that they may complete Humanities (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/humanities/humanities-mh/) or Social Sciences (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/social-science/social-science-mss/) master degree requirements one year after completing the undergraduate degree.

Program Requirements

1. Students in the 5-year INTS BA/MHMSS Program must satisfy all existing requirements for both an undergraduate degree in CLAS with a major in International Studies (p. 639) and a Master of Humanities (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/humanities/humanities-mh/) or Social Science (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/social-science/social-science-mss/) degree. These requirements can be fulfilled through multiple possible paths through the department's curriculum.
2. A minimum of 48 undergraduate credit hours in the International Studies program and 36 graduate credits hours in Humanities or Social Sciences must be completed to earn both an undergraduate and a graduate degree through this 4+1 program.
3. Up to 15 graduate level credit hours in Humanities or Social Sciences coursework may be taken by International Studies undergraduates accepted to the 4+1 program, and these credits will count both towards completion of the International Studies undergraduate degree, and the graduate degree, if the student is later accepted into

the graduate program. No more than 15 credit hours may "double-count" for the MH/ MSS. Elective courses must be in accordance with Graduate Education Policies, therefore, meeting with an advisor regularly is recommended.

4. Students must earn a minimum grade of C- (1.7) in all major courses taken at CU Denver and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Students cannot complete major or ancillary course requirements as P+/P/F or S/U.
5. Students must earn a minimum grade of B- (2.7) in any graduate level course for it to later be counted towards graduate degree requirements.
6. Students must complete a minimum of 24 upper-division (3000-level and above) credit hours and all graduate level credits with CU Denver faculty.

Program Options

BA/MHMSS students may choose to do a general MH or MSS degree or select a track concentration within the degree plan, including Social Justice, Philosophy and Theory, Visual Studies, Women's and Gender Studies, Ethnic Studies, International Studies, Community Health, and Society and Environment.

To learn more about the learning outcomes for the International Studies undergraduate program, please visit our website. (https://clas.ucdenver.edu/ints/international-studies-learning-outcomes/)

To learn more about the learning outcomes for the Master of Humanities and Master of Social Science graduate degrees, please visit our website. (https://clas.ucdenver.edu/mhmss/mhmss-degree-information/)

International Studies Minor

Introduction

Please click here (p. 636) to see International Studies program information.

As the globe becomes increasingly connected, students gravitate towards classes that provide the interdisciplinary skills and international awareness required for success in the 21st century. The International Studies minor at CU Denver offers students a unique opportunity to create an individually tailored and relevant minor based upon a spectrum of international Liberal Arts classes.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor, and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus and online program, available to students at the Denver campus and International College of Beijing.

Declaring This Minor

- Denver students: please see your CLAS advisor.
- ICB students: please see the International Studies advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 credit hours from the approved courses.
2. Students must complete a minimum of 15 upper-division (3000-level and above) credit hours in the minor from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.5. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty from the approved courses.

Program Restrictions, Allowances and Recommendations

1. Students cannot take more than two upper-division courses from the same department for the minor, including the introductory course.
2. The maximum amount of credit hours a student could receive through independent study courses is six.
3. Students may be able to complete all 18 credits via online courses.
4. Additional courses may be considered by individual request. Please contact Alison.Shah@ucdenver.edu

Code	Title	Hours
Complete one of the following introductory courses:		*3*
INTS 2020	Foundations of International Studies [1]	
PSCI 3022	Political Systems of the World	
PSCI 3042	World Politics	
HIST 4032	Globalization in World History Since 1945	
Complete a minimum of 15 upper division (3000-4000 level) elective credits drawn from internationally themed courses. [2]		*15*
The list below is representative of courses that will apply to the minor. Various Global Education/Study Abroad courses may not appear on the approved list of courses. Please consult with an International Studies advisor for current offerings.		
ANTH 3000	Globalization, Migration and Transnationalism	
ANTH 3121	Language, Culture, and Communication	
ANTH 3142	Cultural Diversity in the Modern World	
ANTH/PBHL 3200	Human Migration: Nomads, Sojourners, and Settlers	
ANTH 4010	Medical Anthropology: Global Health	
ANTH/PBHL 4080	Global Health Practice	
ANTH/PBHL 4090	Psychedelic Anthropology	
ANTH 4200	Gender in Cross-Cultural Perspective	
ANTH 4230	Fieldwork Methods	
ANTH 4300	Migrant Health	
ANTH 4320	Archaeology of Mexico and Central America	
ANTH 4350	Anthropology of Globalization	
CHIN 2970	Contemporary Chinese Cinema	
CHIN 3200	Contemporary Chinese Society and Culture	
CHIN 3300	Special Topics on Chinese Film	
CHIN 3840	Independent Study: CHIN	
CHIN 3995	Global Study Topics	
CHIN 4880	Directed Research	
COMM 3230	Chinese Communication & Culture in Context	
COMM 3271	Communication and Diversity	
COMM 4020	Feminist Perspectives on Communication	
COMM/INTS/ RLST 4152	Religion & Communication	
COMM 4270	Intercultural Communication	
COMM 4430	Communication, China, and the US	
COMM 4601	You Are What You Eat: Food as Communication	
COMM 4720	Dynamics of Global Communication	
CMDT 4582	Commodity Supply Chain Management	
CMDT 4682/ FNCE 4802	Commodity Valuation and Hedging	
CMDT 4802	Foundations of Commodities	
ECON 3400	Economics of Sex and Drugs	
ECON 3415	Issues in International Trade and Finance	
ECON 3770	Issues in Economic Development	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4410	International Trade	

ECON 4420	International Finance
ECON 4530	Economics of Natural Resources
ECON 4540	Environmental Economics
ECON 4770	Development Economics
EDFN 3000	Undocumented Mexican Immigration
ENGL 3080	Global Cinema
ENGL 3798	International Perspectives in Literature and Film
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (topic must be approved by International Studies minor advisor)
ENGL 4460	Contemporary World Literature
ENGR 3600	International Dimensions of Technology and Culture
ENGR 3995	Global Technology, Business & Culture
ETST 3108	Chicano/a and Latino/a History
ETST 3110	Indigenous Studies
ETST 3129	Contemporary Latin American Literature
ETST 3272	Global Media
ETST/SOCY 3697	Contemporary Asian American Experience
ETST 3704	Culture, Racism and Alienation
FINE 4610	Pre-Columbian Art
FINE 4630	History of Latin American Art:1520-1820
FINE 4715	Islamic Art and Architecture
FINE 4730	Arts of Japan
FINE 4750	Arts of China
FINE 4770	Art of India and Southeast Asia
FITV 3550	World Theatre
FNCE 3000	Principles of Finance
FNCE 3600	Financial Markets and Institutions
FNCE/INTB 4370	International Financial Management
FREN 3112	Survey of French Literature I
FREN 3120	French Cultural Identities: Myths and Realities
FREN 3122	Survey of French Literature II
FREN 3130	Current Topics of the French-Speaking World
FREN 3140	Contemporary Francophone Cultures
FREN 3200	The Francophone World in the Post-Colonial Era
FREN 4200	French Civilization Through the Nineteenth Century
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries
FREN 4430	Nineteenth Century French Novel
FREN 4480	Twentieth Century French Novel
FREN 4490	Twentieth Century French Theater
FREN 4510	French Women Writers
FREN 4520	Voices of Haiti and the Caribbean
FREN 4600	History of the French Language
GEOG 3120	Geography of Europe
GEOG 3130	Central America and the Caribbean
GEOG 3140	Geography of South America
GEOG 3160	Geography of China
GEOG 3401	Geography of Food and Agriculture
GEOG 3412	Globalization and Regional Development
GEOG 3430	Geography of Tourism
GEOG 4265	Sustainability in Resources Management
GEOG 4301	Population, Culture, and Resources
GEOG 4305	Water Quality and Resources
GEOG 4335	Contemporary Environmental Issues
GEOG 4420	The Politics of Nature
GEOG 4710	Disasters, Climate Change, and Health
GEOG/ENVS 4720	Climate Change: Causes, Impacts and Solutions
GRMN 3200	Current German Society and Culture
HIST 3121	The World at War, 1914-1945
HIST 3232	The American Colonies to 1750
HIST/INTS/ ETST/PHIL/ RLST 3003	From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence
HIST 3345	Immigration and Ethnicity in American History
HIST/ETST 3350	Colonial Latin America
HIST 3364	Native Americans and Spaniards in North America
HIST 3451	Introduction to African History
HIST 3460	Modern Latin American History
HIST 3470	Intro to East Asia: Since 1800
HIST 3480	Introduction to European History
HIST 3500	African History in Novels and Films
HIST 3616	Global History of Energy
HIST 3706	Age of Revolution
HIST/INTS/ CHIN/ETST/ RLST 4002	Race, Gender and Religious Nationalisms in Asia and the US
HIST 4027	Enlightenment and Revolution
HIST 4028	Nations and Classes: 19th Century Europe
HIST 4029	Age of Anxiety in Europe
HIST 4032	Globalization in World History Since 1945
HIST 4046	Victorians and Victorianism
HIST 4055	The Atlantic Slave Trade: Africa, Caribbean and U.S.
HIST 4062	Modern France, 1789 to the Present
HIST 4071	Modern Germany
HIST 4074	Post-War Germany
HIST 4083	Russia Since 1917
HIST 4086	Eastern Europe
HIST 4220	U.S. Foreign Policy Since 1912
HIST/WGST 4303	Sex and Gender in Modern Britain
HIST/WGST 4345	Gender, Science, and Medicine: 1600 to the Present
HIST 4348	Mind and Malady: A History of Mental Illness
HIST/ETST 4411	Modern Mexico
HIST 4414	Nationalism and State Building in Latin America, 1750-1850
HIST 4415	Social Revolutions in Latin America
HIST 4416	The Age of Imperialism
HIST 4417	Commodities and Globalization

HIST 4420	Traditional China: China to 1600
HIST 4421	Modern China
HIST 4431	Modern Japan
HIST 4451	Southern Africa
HIST 4455	African Struggle for Independence
HIST 4461	The Modern Middle East
HIST/RLST 4462	Islam in Modern History
HIST 4471	The Second World War
HIST 4472	The 1950s: Korean War, the Cold War and Social Transformation
HIST 4475	The Vietnam War
HIST 4490	Weapons of Mass Destruction
HIST 4621	Explorers and Exploration
HIST 4622	Oceans In History
INTB 3000	Global Perspectives
INTB/ENTP 4028	Global Study Topics
INTB/MGMT 4400	Environments of International Business
INTB/MGMT 4410	Operations of International Business
INTB 4950	Special Topics in International Business
INTS 3939	Internship
INTS 4840	Independent Study
INTS 4880	Directed Research
LING 3100	Language in Society
MGMT 3830/4830	Business and Sustainability
MGMT/MKTG 4834	London Calling: Global Sports & Entertainment Management
MKTG/INTB 4200	International Marketing
MKTG 4220	Asian Business Development and Marketing
MKTG 4580	International Transportation
PBHL 3041	Health, Culture and Society
PBHL 3070	Perspectives in Global Health
PBHL 3071	Global Topics In Sexual and Reproductive Health
PBHL 4020	Global Health: Comparative Public Health Systems
PBHL 4200	The Global HIV/AIDS Epidemic
PHIL 3280	War and Morality
PHIL 3430	How to think green: Environmental Ethics
PHIL 3500	Ideology and Culture: Racism and Sexism
PHIL 4341	Latin American Philosophy
PSCI 3022	Political Systems of the World
PSCI 3042	World Politics
PSCI 3050	Islamophobia
PSCI 3914	The Urban Citizen
PSCI 4025	Local Governance and Globalization
PSCI 4057/ RLST 4500	Religion and Politics
PSCI 4085	Comparative Governance: Environment and Society
PSCI 4105	Comparative Politics: Europe
PSCI 4115	Third World Politics
PSCI 4126	Politics, Power, and Profit
PSCI/ETST 4144	Indigenous Political Systems
PSCI/ETST 4146	Indigenous Politics
PSCI/WGST 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism
PSCI 4155	Political Systems of the Middle East and North Africa
PSCI/ETST 4156	The Arab-Israeli Peace Process
PSCI 4165/ RLST 3100	Islamic Politics and Culture
PSCI 4176	Civil Resistance in Theory and Practice
PSCI 4185	Corruption in the U.S. and Abroad
PSCI 4186	East Asia in World Affairs
PSCI 4195	Political Systems of Sub-Saharan Africa
PSCI 4206	Social Movements, Democracy and Global Politics
PSCI 4207	Theories of Social and Political Change
PSCI/WGST 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4216	International Politics: Human Rights
PSCI 4224	Dictatorships in 21st Century
PSCI 4225	Democracy and Democratization
PSCI 4226	The United Nations in World Affairs
PSCI 4235	Politics and Markets in Latin America
PSCI 4236	American Foreign Policy
PSCI 4237	American National Security
PSCI 4240	International Security
PSCI/WGST 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4266	International Law
PSCI 4276	Conflicts and Rights in International Law
PSCI 4280	The Politics of War Law
PSCI 4286	International Relations: War or Peace?
PSCI 4326	Advanced International Political Economy: Globalization
PSCI 4354	Environmental Politics
PSCI 4365	Global Ecological Crises
PSCI 4437	Coercion and the State
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4535	Labor and Working Class Politics
PSCI 4545	Immigration Politics
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4645	Comparative Political Leadership
PSCI 4726	Seminar on U.S. and China Relations
PSCI 4736	The Middle East in World Affairs
PSCI 4770	Middle East Politics and Society in Film
PSCI 4807	Political Violence
PSCI 4808	Strategies of Peacebuilding

PSCI 4878	War, Film, and International Law
RLST 3000	Judaism, Christianity and Islam: Affinity and Difference
RLST 3120	Islamic Traditions
RLST/PHIL 3410	Asian Philosophies and Religions
RLST 3500	Religions of India
RLST 3660/ PHIL 3981	Chinese Philosophy and Culture
SOCY 3720	Global Perspectives on Social Issues
SPAN 3101	Introduction to the Study of Literature
SPAN 3199	Topics in Spanish Literature
SPAN 3212	Spanish American Culture and Civilization
SPAN 3213	Contemporary Latin American Culture and Institutions
SPAN 3221	Culture and Civilization of Spain I
SPAN 3222	Culture and Civilization of Spain II
SPAN 3223	Contemporary Spanish Culture and Institutions
SPAN 3225	Special Topics In Hispanic Culture
SPAN 3230	Ibero-American Cultures through Film
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact
SPAN 3400	Survey of Spanish Literature I
SPAN 3410	Survey of Spanish Literature II
SPAN 3700	Spanish for International Business I
SPAN 3710	Spanish for International Business II
SPAN 3782	Introduction to Translation I
SPAN 3792	Introduction to Translation II
SPAN 4010	History of the Spanish Language
SPAN 4020	Spanish Sociolinguistics
SPAN 4060	Dialects of the Spanish-Speaking World
SPAN 4110	Contemporary Spanish Literature
SPAN 4130	Medieval Spanish Literature
SPAN 4150	Masterpieces of Spanish Literature
SPAN 4170	Golden Age Drama
SPAN 4180	Modernism
SPAN 4190	Nineteenth-Century Spanish Novel
SPAN 4300	Generation of 1898
SPAN 4320	Interculturalism and Transnationalism in Modern Spain
SPAN 4330	Modern Culture of Spain through Film and Narrative
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature
SPAN 4350	Don Quijote
SPAN 4360	Women and the Spanish Civil War
SPAN 4380	Romanticism in Spain
SPAN 4399	Special Topics: Spanish Peninsular Literature
SPAN 4501	Borges: An Introduction to His Labyrinths
SPAN 4512	Contemporary Argentine Short Stories
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial
SPAN 4522	Mexican Literature II: 19th to 21st Centuries
SPAN 4525	Orientalisms In The Hispanic Tradition
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema
SPAN 4550	Garcia Marquez: Words of Magic
SPAN 4590	Ibero-American Thought
Total Hours	**18**

[1] Students who do not select INTS 2020 (https://catalog.ucdenver.edu/search/?P=INTS%202020) Foundations of International Studies for their introductory course are permitted to take that course to fulfill one of the five upper division elective courses.

[2] Students are encouraged to select a 3000- or 4000-level seminar in a discipline other than their major to ensure that high level work in another field is being performed.

Courses on international and global topics may come from Anthropology, Communication, Economics, Ethnic Studies, Geography, History, Political Science, or other departments. Pre-approved courses have been clustered by department to guide student selection. Other courses may be approved with permission of an International Studies program advisor. More recent course updates and thematic groupings of course may be found on the International Studies program website.

To learn more about the Student Learning Outcomes for this program, please visit our website. (https://clas.ucdenver.edu/ints/international-studies-learning-outcomes/)

Law Studies

Coordinator: Omar Swartz (MHMSS), JD, Duke University; PhD, Purdue University
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Overview

The law studies minor at CU Denver is an interdisciplinary course of studies intended to help students become intelligent and critical scholars of legal and political discourse. While the minor may be useful for students contemplating law school, it is also intended to appeal to a wider group interested in issues relating to law and society and careers in public policy-related fields. The minor is designed to achieve the following three interrelated goals:

- to introduce students to the major areas of law that affect life in the United States and important legal issues that influence current events;
- to enable students to become familiar and fluent with a legal vocabulary and legal reasoning; and
- to better prepare students with the analytical and conceptual tools to be critical citizens in our constitutional democracy.

In addition to these goals, students who complete the minor with the intention of attending law school may find themselves more prepared than they otherwise would be for the often mystifying and rigorous first year of law school. To help these students, the program contains an advising component which assists students who are contemplating law school to provide them with a realistic appraisal of law school and of the legal profession. The counselors will aid students with the law school application process.

Click here (p. 656) for more information about the Minor in Law Studies.

Programs

- Law Studies Minor (p. 656)

Social Sciences (SSCI)

SSCI 3939 - Internship (1-12 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SSCI 4025 - Legal Advocacy/Engagement (3 Credits)
This course is an introduction to litigation practice skills in the context of cutting-edge litigation to create social change. Students will participate in mock litigation activities including conducting legal research, writing briefs, deposing witnesses, and making oral argument. The course will assist students in understanding basic legal advocacy while exploring the ways in which the legal system facilitates or stymies social change. The class is designed to be highly interactive, with a strong emphasis on learningby-doing and collaborative problem-solving. It is intended for students with a strong interest in attending law school who are committed to preparing themselves for that experience by working with material that maybe initially unfamiliar or daunting. If students undertake that challenge, they can expect to leave the class better prepared for law school and knowledgeable about how law is used to achieve social change. Note: Law Studies students should take this course as one of the last courses for the minor. Max hours: 3 Credits.
Grading Basis: Letter Grade

SSCI 4050 - Special Topics in Law Studies (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of law within the social sciences from various theoretical and research perspectives. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4060 - Topics in Law Studies: Constitutional Thought (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of constitutional thought as related to law studies. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4070 - Topics in Law Studies: Social Context of Law (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of the social context of law. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4251 - Introduction to Legal Studies (3 Credits)
A survey of the United States legal system, including lawmaking powers, jurisdiction, court procedures, professional ethics and major principles of business law, contracts, estates and probate, family law, property and torts. Cross-listed with HUMN 4251/HUMN 5251/SSCI 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SSCI 4325 - First Amendment: Theory and Context (3 Credits)
First Amendment jurisprudence including free speech/responsibility, sedition/seditious libel/dissent, prior restraints, time/place/manner restrictions, hate/intimidating speech, defamation, privacy/security tensions, intellectual property/public good, advertising, corporate speech, sexual expression, and public status of religion. Cross-listed with HUMN 4325, HUMN 5325, SSCI 5325, PSCI 4325 and PSCI 5325. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SSCI 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SJUS 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SSCI 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of social sciences. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

SSCI 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Law Studies Minor

Introduction

Please click here (p. 654) to see Law Studies department information.

The Minor in Law Studies at the University of Colorado Denver (CU Denver) is an interdisciplinary course of studies intended to help students become intelligent and critical scholars of legal and political discourse. While the minor may be useful for students contemplating law school, it is also intended to appeal to a wider group of students interested in issues relating to law and society and careers in public policy related fields. The minor is designed to achieve the following three interrelated goals.

First, to introduce students the major areas of law that affect life in the United States and important legal issues that influence current events. **Second**, to enable students to become familiar and fluent with a legal vocabulary and legal reasoning. **Third**, to better prepare students with the analytical and conceptual tools to be critical citizens in our constitutional democracy. In addition to these goals, students who complete the minor and who intend to attend law school may find themselves more prepared than they otherwise would be for the often mystifying and rigorous first year of law school. To help these students, the program contains a strong advising component which assists students who are contemplating law school to provide them with a realistic appraisal of law school and of the legal profession. The counselors will aid students with the law school application process.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- To apply for this minor, students must complete and submit a major/minor change declaration form to the CLAS Advising Office in North Classroom, 1030.
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 credit hours in the minor from the approved courses.
2. Students must complete a minimum of 18 upper division (3000-level and above) credit hours.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the minor taken at CU Denver and must achieve a minimum cumulative minor GPA of 3.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of 12 credit hours for the minor with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. At least 12 credits must be taken in residence at CU Denver from CU Denver faculty. Students may transfer up to 6 credits at the discretion of the director.
2. Courses taken for a student's major cannot be used to fulfill any requirements for the minor unless prior permission is granted by the minor coordinator.
3. Every course used to complete minor requirements must be upper-division (3000-level and above).

Code	Title	Hours
Complete the following program requirements:		
Complete the following Foundations courses: [1]		*6*
HUMN 4251	Introduction to Legal Studies	
SSCI 4025	Legal Advocacy/Engagement	
Complete two of the following Constitutional Thought courses: [1]		*6*
PSCI 4477	Constitutional Law I	
PSCI 4487	Constitutional Law II	
SSCI 4060	Topics in Law Studies: Constitutional Thought	
SSCI 4325	First Amendment: Theory and Context	
Complete two of the following Social Context of Law courses:		*6*
BLAW 3050	Business Law and Ethics	
COMM 3231	Famous U.S. Trials	
CRJU 4430	Law and Society	
PHIL 4260	Why Obey the Law? Introduction to Philosophy of Law	
PSCI 4827	Women and the Law	
PSYC 3505	Psychology and the Law	
SOCY 4700	Sociology of Law	
SSCI 4070	Topics in Law Studies: Social Context of Law	
Total Hours		**18**

[1] No substitutions allowed for Foundations or Constitutional Thought courses.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mhmss/undergraduate-law-studies-minor/).

Mathematical and Statistical Sciences

Chair: Julien Langou
Associate Chair: Troy Butler
Administrative Assistant III: Miriam Venzor Majalca
Office: Student Commons Building, 4th Floor
Telephone: 303-315-1700 (department)
Fax: 303-315-1704
Department Email: mathstats-staff@ucdenver.edu

Overview

The Department of Mathematical and Statistical Sciences at the University of Colorado Denver offers degrees and certificates at the undergraduate and graduate levels in mathematics, applied mathematics, data science, and statistics through coursework, research and industrial collaboration. Traditional courses such as calculus, linear algebra, probability, statistics and discrete mathematics are offered regularly by the department. In addition, contemporary subjects such as high-performance computing; numerical analysis, optimization, statistical methods, and operations research are also well represented by course offerings and faculty interests. In all of its activities, the department embodies the outlook that mathematics, statistics, computing and data science are powerful tool that can be used to solve problems of immediate and practical importance.

Apart from the specialized mathematical and statistical skills acquired through course work, the degrees and certificates also provide general skills that are valued by many employers. These skills include problem solving, critical thinking, analysis, facility with data, the ability to process quantitative information, and perhaps most important of all, the ability to learn new skills and concepts quickly.

Center for Computational Mathematics

Director: Jan Mandel
Website: http://ccm.ucdenver.edu/

The Center for Computational Mathematics is composed of faculty members who have an interest in computational mathematics, the study of solving mathematical problems with computers. The center resides in the Department of Mathematical and Statistical Sciences and includes faculty members from various other departments. The primary goal of the center is to foster research in computational mathematics and to maintain a strong educational program at all levels. It has extensive ties with industry along the Front Range and with government laboratories throughout the nation. It offers students an excellent opportunity to receive training and experience in this exciting new field. The center operates several supercomputing clusters.

Math Clinic

Website: https://clas.ucdenver.edu/mathematical-and-statistical-sciences/math-clinic (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/math-clinic/)

Each semester, the mathematical and statistical sciences department conducts math clinics that are open to both undergraduate and graduate students. Each clinic is sponsored by a business, government agency or research organization. The clinic sponsor provides a specific project on which students work with the supervision of a faculty member and a sponsor representative. Every clinic produces a final report to the sponsor and provides participating students with an opportunity to apply mathematics to relevant problems. Recent math clinic sponsors include Raytheon, Lockheed Martin, Xenometrix, Budget Truck Rental and United Launch Alliance.

Statistical Consulting Service

The Department of Mathematical and Statistical Sciences regularly offers a graduate course in statistical consulting in which students work on problems provided by researchers and clients at CU Denver and in the Denver metropolitan area. Potential clients should contact the department at 303-315-1700.

Undergraduate Information

Director: Adam Spiegler

The Department of Mathematical and Statistical Sciences offers a BS program that provides broad training in mathematics with the option of specializing in one of four areas of special emphasis, or simply satisfying the requirements without specifying an area. The four areas of emphasis are: applied mathematics, probability and statistics, data science, and economics.

To determine which math course a student should take first, see the Department of Mathematical and Statistical Sciences webpage (www.math.ucdenver.edu (http://www.math.ucdenver.edu)).

Students with potential transfer credit that was not automatically accepted upon admission should request the course be evaluated by following the Transfer Course Evaluation Process (p. 380) as outlined in the College of Liberal Arts Policy section of this catalog. Questions about the transfer evaluation process should be directed to clas.transfer@ucdenver.edu.

Click here (p. 380) to go to information about declaring a major. Once a major is declared, students should contact the Department of Mathematical and Statistical Sciences to meet with a math advisor, and continue to do so at least once per semester. All mathematics majors should visit the CLAS Advising Office (p. 117) to have graduation requirements checked at a minimum the semester prior to graduation.

Please click here (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-programs/) to learn more about the MATH programs on their website.

Graduation With Honors

The mathematical and statistical sciences department recognizes students who complete the undergraduate program with distinction.

To be eligible for graduation with honors at the *cum laude* level a student must graduate with an overall GPA of 3.2 or better for the last 60 credit hours taken at University of Colorado Denver and either:

- Option 1: Have a GPA of 3.7 or better in upper-division math courses taken at CU Denver, **or**
- Option 2: Have a GPA of 3.5 or better in upper-division math courses taken at CU Denver and must complete an honors project.

To be eligible for graduation with honors at the *magna cum laude* level a student must graduate with an overall GPA of 3.2 or better for the last 60 credit hours taken at University of Colorado Denver and either:

- Option 1: Have a GPA of 3.85 or better in upper-division math courses taken at CU Denver, **or**

- Option 2: Have a GPA of 3.7 or better in upper-division math courses taken at CU Denver and must complete an honors project.

To be eligible for graduation with honors at the *summa cum laude* level a student must graduate with an overall GPA of 3.2 or better for the last 60 credit hours taken at University of Colorado Denver and satisfy **all** of the following:

- Have a GPA of 3.7 or better in upper-division math courses taken at CU Denver and must complete an honors project.
- When a recommendation for Honors at the Summa Cum Laude is brought to Department as a motion, a vote will be taken and such a motion must be passed by a two-thirds majority of those voting at the meeting.
- Considerations such as overall quality of the candidate's honors project, outreach, community, other extra-curricular activities relating to mathematics.

Undergraduate Applied Statistics Certificate

Director: Joshua French
Email: Joshua.French@ucdenver.edu

There is a growing need for qualified statistical analysts of the ever-increasing amounts of data collected in business, industry, and government. The certificate in applied statistics program is designed to give students a strong background in statistical methodology and data analysis in preparation for opportunities in the workforce or for graduate studies. The Department of Mathematical and Statistical Sciences offers certificates in applied statistics at both the undergraduate and graduate levels.

Click here (p. 684) to learn about the Undergraduate Applied Statistics Certificate.

Undergraduate Certificate in Data Science Essentials

Director: Adam Spiegler
Email: math.advising@ucdenver.edu

Data scientists will have essential competencies in several areas related to analysis of data. In particular, a data scientist should: have strong programming ability in a language popular in data science (e.g., Python, R, Julia); be able to extract, manipulate, and visualize data; have an understanding of probability and statistics in order to quantify uncertainty; be able to build complex models for finding patterns and explaining data. This certificate should provide students with essential skills for introductory data science.

Click here (p. 686) to learn about the Undergraduate Certificate in Data Science Essentials

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/) catalog to read about our graduate programs.

Programs

- Mathematics, BS (p. 666)
- Mathematics - Applied Option, BS (p. 668)
- Mathematics - Data Science Option, BS (p. 670)
- Mathematics - Probability and Statistics Option, BS (p. 672)
- Mathematics, 4+1 BS/ Applied Mathematics, MS (p. 675)
- Mathematics, 4+1 BS/ Statistics, MS (p. 678)
- Data Sciences Minor (p. 681)
- Mathematics Minor (p. 683)
- Applied Statistics Undergraduate Certificate (p. 684)
- Data Science Undergraduate Certificate (p. 686)

Faculty

Professors:

Stephen Hartke, PhD, Rutgers University
Michael S. Jacobson, PhD, Emory University
Julien Langou, PhD, Institute National Polytechnique of Toulouse, France
Weldon A. Lodwick, PhD, Oregon State University
Jan Mandel, PhD (equivalent), Charles University, Czechoslovakia
Florian Pfender, PhD, Emory University
Stephanie A. Santorico, PhD, North Carolina State University

Associate Professors:

Stephen Billups, PhD, University of Wisconsin-Madison
Steffen Borgwardt, PhD, Technische Universität München
Troy Butler, PhD, Colorado State University
Joshua French, PhD, Colorado State University
Burton Simon, PhD, University of Michigan, Ann Arbor
Diana White, PhD, University of Nebraska

Assistant Professors:

Erin Austin, PhD, University of Minnesota
Yaning Liu, PhD, Florida State University
Farhad Pourkamali Anaraki, PhD, University of Colorado Boulder
Emily Speakman, PhD, University of Michigan

Associate Professors, Clinical Teaching Track:

RaKissa Manzanares, PhD, University of Northern Colorado
Adam Spiegler, PhD, University of Arizona
Dmitriy Ostrovskiy, PhD, State University of New York at Stony Brook

Senior Instructors:

Michael Kawai, MS, University of Colorado Denver
Gary Olson, MS, University of Colorado Denver
Robert Rostermundt, PhD, University of Colorado Denver

Instructors:

Joe Billello, MS, Long Island University
Daniel Klie, MS, University of Colorado Denver
Lance Lana, MS, University of Colorado Denver
Pamela Whitten, MA, University of Colorado Boulder

International College of Beijing Faculty:

Thomas Dunn, PhD, North Dakota State University
Joseph Quarcoo, PhD, University of South Florida

Research Faculty:

Aime Fournier, PhD, Yale University

Emeritus Faculty:

William Briggs, PhD, Harvard University
William E. Cherowitzo, PhD, Columbia University
Kathryn L. Fraughnaugh, PhD, University of Houston
J. Richard Lundgren, PhD, Ohio State University

Andrew Knyazev, PhD, Russian Academy of Sciences
Stanley E. Payne, PhD, Florida State University

Mathematics Courses

MATH 1010 - Mathematics for the Liberal Arts (3 Credits)
Designed to give liberal arts students the skills required to understand and interpret quantitative information that they encounter in the news and in their studies, and to make quantitatively-based decisions in their lives. Topics include a survey of logic and analysis of arguments, identifying fallacies in reasoning, working with numbers and units, linear and exponential relations and essentials of probability and statistics. The emphasis is on applications with case studies in economics, finance, environmental sciences, health, music and science. Note: This course assumes that students have knowledge equivalent to three years of high school mathematics (two years of algebra). Requisite: In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 1011. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1
Grading Basis: Letter Grade
In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 1011.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1011 - Math for Liberal Arts Workshop (1 Credit)
Prepares students for college-level mathematics. Students receive one-on-one and small-group instruction on mathematics topics related to college level mathematics success. Coreq: MATH 1010. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MATH 1010
Typically Offered: Fall, Spring.

MATH 1060 - Finite Mathematics (3 Credits)
This course is designed to introduce students to mathematics topics commonly encountered by business students. This course meets the universities CORE mathematics requirement. The topics include linear equations and inequalities, linear, quadratic, exponential and logarithmic functions, simple, compound and continuous interest, future and present value annuities, amortization, systems of equations, linear programming, logic, sets and probability. Graphing technology is used extensively and business applications are emphasized throughout. Terms offered: Fall and Spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Mathematics.

MATH 1070 - College Algebra for Business (3 Credits)
Covers the same mathematical topics as College Algebra, MATH 1110, but with business applications. Note: Graphics calculator required. Note: Students may not receive credit for this course if they have already received credit for MATH 1110 or MATH 1130. Note: 24 on ACT-Math, 560 on SAT-Math or above average performance in intermediate algebra, algebraic literacy or integrated math are strongly recommended as preparation for this course. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics.

MATH 1080 - Calculus for Social Sciences and Business (3 Credits)
A one-semester course in single-variable calculus. Topics include limits, derivatives, differentiation rules, integration and integration rules. Emphasis is on applications to business and social sciences. Note: No knowledge of trigonometry is required. Those planning to take more than one semester of calculus should take MATH 1401 instead of MATH 1080. Prereq: MATH 1070 or MATH 1110 with a C- or higher is required for students to register for this course. No co-credit with MATH 1401. Max hours: 3 Credits.
Grading Basis: Letter Grade
MATH 1070 or MATH 1110 with a C- or higher
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.

MATH 1108 - Stretch College Algebra-Part 1 (3 Credits)
This course is the first half of a two-semester sequence (consisting of MATH 1108 followed by MATH 1109). The two-semester course sequence is equivalent to MATH 1110 (College Algebra). The topics in algebra are designed for students who intend to take the calculus sequence. An in-depth study of functions, linear and quadratic equations, circles, inequalities, domain & range, piecewise and transformation of functions, mathematical modeling and select other topics are explored. Desmos graphing technology is used extensively and students will review algebraic skills such as factoring and completing the square, graphing techniques and function properties where needed. Applications are emphasized. Note: No co-credit with MATH 1070, MATH 1110 or MATH 1130. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 1109 - Stretch College Algebra-Part 2 (3 Credits)
This course is the second half of a two-semester sequence (consisting of MATH 1108 followed by MATH 1109). The two semester course sequence is equivalent to MATH 1110 (College Algebra). The topics in algebra are designed for students who intend to take the calculus sequence. Data scatter plots and curve fitting, solving equations, polynomial functions, rational functions, exponential and logarithmic functions and selected other topics are explored. Desmos graphing technology is used extensively and students enrolled in MATH 1109 will review algebraic skills such as solving linear and quadratic equations, factoring and completing the square, graphing techniques and function properties where needed. Applications are emphasized. Note: No co-credit with MATH 1070, MATH 1110 or MATH 1130. Prereq: MATH 1108 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MATH 1108 with C- or higher.
Additional Information: Denver Core Requirement, Mathematics.

MATH 1110 - College Algebra (4 Credits)
Topics in algebra designed for students who intend to take the calculus sequence. Functions, domains, ranges, graphs, data scatter plots and curve fitting, solving equations and systems of equations, polynomial, rational, exponential and logarithmic functions and other topics. Applications are emphasized. Note: Students may not receive credit for this course if they have already received credit for MATH 1070 or MATH 1130. Prereq: MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA10 or MA30 or MA01 Student Group OR ALEKS PPL score 46-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA10 or MA30 or MA01 Student Group OR ALEKS PPL score 46-100.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: Fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

MATH 1120 - College Trigonometry (3 Credits)
Topics in trigonometry, analytic geometry, and elementary functions designed for students who intend to take the calculus sequence. Angles and trigonometry functions of acute angles, analytic trigonometry, fundamental trigonometric functions and identities including hyperbolic trigonometry, parametric equations, and polar coordinate system. Graphic calculators and/or computer algebra systems are used extensively. Applications are emphasized. Prereq: MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Students with a grade of B- or better in MATH 1110 or MATH 1070 pass the course at a much higher rate. No co-credit with MATH 1130. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1130 - Precalculus Mathematics (4 Credits)
Condensed treatment of the topics in MATH 1110 and 1120. Prereq: : MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. No co-credit with MATH 1070, 1110 or 1120. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1376 - Programming for Data Science (3 Credits)
The course introduces scientific computing using Python. Topics will include programming skills such as assignment, control statements, loops, and functions. Applications will focus on mathematical and data science topics. Prereq: MATH 1109 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 or MATH 2830 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. Max hours: 3 Credits.
Grading Basis: Letter Grade
MATH 1109 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 or MATH 2830 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.

MATH 1401 - Calculus I (4 Credits)
First course of a three-semester sequence (MATH 1401, 2411, 2421) in calculus. Topics covered include limits, derivatives, applications of derivatives, and the definite integral. Note: No co-credit with MATH 1080. Prereq:MATH 1109 or MATH 1070 or MATH 1110 with a C- or higher and MATH 1120 with a C- or higher or MATH 1130 with a C- or higher or MATH 1401 with a C- or higher OR entry into the MA01 Student Group OR ALEKS PPL score 76-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Max Hours: 4 Credits.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 with a C- or higher and MATH 1120 with a C- or higher or MATH 1130 with a C- or higher or MATH 1401 with a C- or higher OR entry into the MA01 Student Group OR ALEKS PPL score 76-100.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.

MATH 1840 - Independent Study. (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

MATH 2411 - Calculus II (4 Credits)
The second of a three-semester sequence (MATH 1401, 2411, 2421) in calculus. Topics covered include exponential, logarithmic, and trigonometric functions, techniques of integration, indeterminate forms, improper integrals and infinite series. Prereq: C- or better in MATH 1401. Note: Students with a grade of B- or better in MATH 1401 pass this course at a much higher rate. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 1401
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2421 - Calculus III (4 Credits)
The third of a three-semester sequence in Calculus (MATH 1401, 2411 and 2421). Topics include vectors, vector-valued functions, partial differentiation, differentiation, multiple integration, and vector calculus. Prereq: C- or better in MATH 2411. Note: Students with a grade of B- or better in MATH 2411 pass this course at a much higher rate. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1
Grading Basis: Letter Grade
Prereq: C- or better in MATH 2411
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2810 - Topics (1-3 Credits)
Topics in mathematics with various subtitles reflecting course content. Prereq: permission of instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MATH 2830 - Introductory Statistics (3 Credits)
Basic statistical concepts, summarizing data, probability concepts, distributions, confidence intervals, hypothesis testing. Note: This course assumes that students have knowledge equivalent to three years of high school mathematics (two years of algebra), intermediate algebra, or Algebraic Literacy at a Colorado Community College at the start of class. Students who have a grade of B- or better in one of these courses pass at a much higher rate. Term offered: fall, spring, summer. Requisite: In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 2831. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 2831.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2831 - Introductory Statistics Workshop (1 Credit)
Prepares students for college-level mathematics. Students receive one-on-one and small-group instruction on mathematics topics related to college level mathematics success. Coreq: MATH 2830. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Co-requisite: MATH 2830
Typically Offered: Fall, Spring.

MATH 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MATH 3000 - Introduction to Abstract Mathematics (3 Credits)
Students learn to prove and critique proofs of theorems by studying elementary topics in abstract mathematics, including logic, sets, functions, equivalence relations and elementary combinatorics. Coreq: MATH 2421 or MATH 3191. Note: This course assumes that students have taken MATH 2411 or equivalent. Students who have a grade of B- or better in MATH 2411 pass at a much higher rate. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 2421 or MATH 3191
Typically Offered: Fall, Spring, Summer.

MATH 3041 - Fundamental Mathematics: Algebra, Probability and Data Analysis (3 Credits)
This course is particularly pertinent to prospective elementary teachers, involving algebra, probability and data analysis from a modern approach. Its primary emphasis is asking and answering questions intelligently about our world through the use of algebra, probability, and data analysis. Explorations focus on representing, analyzing, generalizing, formalizing, and communicating patterns and the chances of future events. Mathematics content will be presented in a problem solving and exploratory context, using appropriate instructional tools. This course will not satisfy the requirements for a major in Mathematics. Prereq: MTED 3040 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MTED 3040 with a C- or higher.
Additional Information: Denver Core Requirement, Mathematics.

MATH 3191 - Applied Linear Algebra (3 Credits)
Linear algebra is the mathematics of vectors and matrices and is fundamental for the representation and manipulation of data. List of topics covered: Definition and use of vectors and matrices, Matrix algebra, Systems of linear equations, Reduced Row Echelon Form, Trace and determinant, Linear independence and span, Basis and dimension, Null space and range, Rank theorem, Vector spaces and linear transformations, Eigenvalues and Eigenvectors, Diagonalization, Inner products, Orthogonal projections, Gram-Schmidt algorithm, Diagonalization of symmetric matrices, Singular value decomposition. Applications such as computer graphics, machine learning, Markov chains, and data reduction are considered. Note: No co-credit with MATH 3195. Prereq: MATH 1401 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher
Typically Offered: Fall, Spring, Summer.

MATH 3195 - Linear Algebra and Differential Equations (4 Credits)
Presents the essential ideas and methods of linear algebra and differential equations, emphasizing the connections between and the applications of both subjects. The course is designed for students in the sciences and engineering. This course will not satisfy the requirements for a major in Mathematics. Note: No co-credit with MATH 3200 and MATH 3191. Prereq: MATH 2411 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 2411
Typically Offered: Fall, Spring, Summer.

MATH 3200 - Elementary Differential Equations (3 Credits)
First and second order differential equations, Laplace transforms, systems of equations, with an emphasis on modeling and applications. Note: No co-credit with MATH 3195. Prereq: MATH 2411 with a C- or higher. Coreq: MATH 3191. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 2411 with a C- or higher, Co-requisite MATH 3191.
Typically Offered: Fall, Spring, Summer.

MATH 3210 - Higher Geometry I (3 Credits)
Studies the foundations of modern geometry by examining axiomatic systems for various geometrics, with an emphasis on non-Euclidean hyperbolic geometry. Prereq: C- or better in MATH 3000. Cross-listed with MCKE 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 3000

MATH 3301 - Introduction to Optimization (3 Credits)
Introduces a mathematical approach for decision-making in practice based on optimization. Students will learn to model, analyze and solve a variety of problems from deterministic operations using both continuous and discrete mathematical programming algorithms and software. Note: this course assumes that students have taken MATH 3191 or MATH 3195 or equivalent. Students who have received a grade of B- or better in MATH 3191 or 3195 pass this course at a much higher rate. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

MATH 3302 - Simulation in Operations Research (3 Credits)
Elementary stochastic processes and standard nondeterministic operations research models solved by simulation: Markov chains, Poisson process, Monte Carlo and discrete-event simulation, queuing theory, and inventory models. Note: This course assumes that students have programming experience (e.g. MATLAB), and have taken MATH 3191 and MATH 3800 or 4810 or equivalent. Students who have a grade of B- or better in MATH 3191 and MATH 3800 or 4810 pass this course at a much higher rate. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 3376 - Data Wrangling & Visualization (3 Credits)
The course provides an introduction to obtaining, restructuring, and visualizing complex data sets. Students will learn to manipulate many data types, store data in a variety of structures, and construct static and dynamic plots in a variety of contexts. Students earning a B- or better in Math 1376 or 4387 are more likely to be successful in this course than students earning lower grades. Prereq: MATH 1376 or MATH 4387 or CSCI 1410/1411 with a C- or higher and MATH 2830 or MATH 3382 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1376 or MATH 4387 or CSCI 1410/1411 with a C- or higher and MATH 2830 or MATH 3382 with a C- or higher

MATH 3382 - Statistical Theory (3 Credits)
Probability, random variables, properties of distributions, bootstrap methods, maximum likelihood and method of moments estimation, properties of estimators, classical methods for confidence intervals and hypothesis testing. Prereq: MATH 2421 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 with a C- or higher.
Typically Offered: Fall, Spring.

MATH 3440 - Introduction to Symbolic Logic (3 Credits)
Covers truth functional and quantificational logic through polyadic first order predicate calculus and theory of identity. Attention is given to such problems in metatheory as proofs of the completeness and consistency of systems of logic. Cross-listed with PHIL 3440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 3511 - Mathematics of Chemistry (4 Credits)
Multivariate functions, probability and statistics for chemistry, matrices and vectors, mathematics of reaction kinetics and symmetry point groups. Course covers mathematics needed for CHEM 4511 and 4521. This course will not satisfy the requirements for a major in Mathematics. Prereq: MATH 2411, CHEM 2031 or CHEM 2081, CHEM 2061 or CHEM 2091. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411, CHEM 2031 or CHEM 2081, CHEM 2061 or CHEM 2091
Typically Offered: Fall.

MATH 3800 - Probability and Statistics for Engineers (3 Credits)
Basic probability theory, discrete and continuous random variables, point and interval estimation, test of hypotheses, and simple linear regression. Note: no co-credit with MATH 4810. This course will not satisfy the requirement for a major in Mathematics. Note: This course assumes that students have taken MATH 2411 and have either previously taken MATH 2421 or are taking MATH 2421 the same semester as MATH 3800. Students who have a grade of B- or better in MATH 2411 pass this course at a much higher rate. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MATH 3810 - Introduction to Probability (3 Credits)
Fundamentals of probability theory with connection to practical application through simulation. Topics include: Axioms of probability, conditional probability, independence, law of total probability, Bayes theorem, random variables, probability distributions, expected value and variance. Important distributions such as binomial, normal, exponential, and Poisson distributions. Joint and conditional distributions, conditional expectation and variance, functions of random variables. Laws of large numbers (weak and strong), Central Limit Theorem. An emphasis will be placed on using simulation to solve problems. Note: No co-credit with MATH 3800. Coreq: MATH 2421. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 2421.
Typically Offered: Fall, Spring.

MATH 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

MATH 4010 - History of Mathematics (3 Credits)
A history of the development of mathematical techniques and ideas from early civilization to the present, including the inter-relationships of mathematics and sciences. Prereq: MATH 2411 with a C- or higher. Coreq: MATH 3000 or 3191. Cross-listed with MATH 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411 with a C- or higher Coreq: MATH 3000 or 3191
Typically Offered: Spring.

MATH 4015 - Capstone Course for Secondary Teachers (3 Credits)
High school mathematics from an advanced perspective: analyses of alternative definitions, extensions and generalizations of familiar theorems; discussions of historical contexts in which concepts arose; applications of mathematics. This course will only satisfy the requirements for the Mathematics Education option of the major in Mathematics. Note: this course assumes that students have taken MATH 3210, 4310 and 3140 or equivalent. Cross-listed with MATH 5015. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4027 - Topics in Mathematics (3 Credits)
Special topics in mathematics will be covered; consult 'Schedule Planner' for current topics and prerequisites. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MATH 4110 - Theory of Numbers (3 Credits)
Every other year. Topics include divisibility, prime numbers, congruencies, number theoretic functions, quadratic reciprocity, and special diophantine equations, with applications in engineering. Prereq: Grade of C- or better in MATH 3000. Note: Students who have a grade of B- or better in MATH 3000 pass this course at a much higher rate. Cross-listed with MATH 5110. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 3000
Typically Offered: Spring.

MATH 4140 - Introduction to Modern Algebra (3 Credits)
Studies the fundamental algebraic structures used in modern mathematics. Topics include groups, rings, fields and polynomials. Note: This course assumes that students have taken MATH 3000 or equivalent and either MATH 3191 or MATH 3195. Students who have a grade of B- or better in these courses pass at a much higher rate. Cross-listed with MCKE 5140. Prereq: MATH 3000 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3000 with a C- or higher.
Typically Offered: Spring.

MATH 4310 - Introduction to Real Analysis I (3 Credits)
Calculus of one variable, the real number system, continuity, differentiation, integration theory, sequence and series. Prereq: Grade of C- or better in MATH 2421 and 3000. Note: Students who have a grade of B- or better in MATH 2421 and 3000 pass this course at a much higher rate. Cross-listed with MCKE 5310. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- (1.7) or better in MATH 2421 and 3000
Typically Offered: Fall.

MATH 4320 - Introduction to Real Analysis II (3 Credits)
Convergence, uniform convergence; Taylor's theorem; calculus of several variables including continuity, differentiation and integration; Picard's theorem in ordinary differential equations and Fourier series. Prereq: MATH 4310 with a C- or higher. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 4310 with a C- or higher.
Typically Offered: Spring.

MATH 4337 - Intro to Statistical and Machine Learning (3 Credits)
This is an applied, hands-on course in statistical and machine learning. This course will introduce students to the general framework, best practices, model training, and assessment for machine learning methods from the viewpoint of statistics. Both supervised and unsupervised methods are covered including penalized regression, knearest neighbors, clustering, and neural networks. Additional machine learning topics such as random forests and support vector machines are included as time permits. Ultimately, students will learn how and why to use a particular method, how to validate and explain the results, and apply the methods to real data. Note: It is recommended that students are comfortable learning a statistical computing language such as R or Python as these will be taught alongside the course material. Students with minimal programming experience should expect to spend more time learning the programming language throughout the course. Prereq: MATH 4387 or MATH 5387 or MATH 4830 or MATH 5830 or BIOL 3763 with a C- or higher. Students who have completed a different statistics course that contains regression and computing may seek instructor permission to enroll. Cross-listed with MATH 5337. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 4387 or MATH 5387or MATH 4830 or MATH 5830 or BIOL 3763 with a C- or higher.

MATH 4387 - Applied Regression Analysis (3 Credits)
Topics include simple and multiple linear regression, model diagnostics and remediation, and model selection. Emphasis is on practical aspects and applications of linear models to the analysis of data in business, engineering and behavioral, biological and physical sciences. Prereq: Grade of C- (1.7) or better in MATH 3191 and in MATH 3800 or 4820 or 3382. Note: Students who have a grade of B- or better in MATH 3191, an A in MATH 3800 or a B- or better in MATH 4820 pass this course at a much higher rate. Cross-listed with MATH 5387. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- (1.7) or better in MATH 3191 and in MATH 3800 or 4820 or 3382
Typically Offered: Fall.

MATH 4388 - Machine Learning Methods (3 Credits)
Regression, neural networks, clustering, support vector machines, random forests, and other prediction/classification techniques will be used to solve supervised and unsupervised learning problems. This course will connect each topic with the underlying mathematical foundation such as optimization methods and statistical inference. A key focus is deriving the methods and their properties to guide proper application. Students will learn how to apply methods using standard libraries from Python, R, or Matlab. Prereq: MATH 1376 or MATH 3250 and MATH 3382 or MATH 3800 and MATH 3191 or MATH 3195, all with a C- or higher. Cross-listed with MATH 5388. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1376 or MATH 3250 and MATH 3382 or MATH 3800 and MATH 3191 or MATH 3195, all with a C- or higher.

MATH 4390 - Game Theory (3 Credits)
Zero-sum and non-zero-sum games; Nash equilibrium and the principle of indifference; Shapley value and other concepts of fair division; Evolutionary game theory, ESS, and evolutionary population dynamics. Applications in economics, business, and biology. Note: This course assumes that students have programming experience (e.g. MATLAB), and have taken MATH 2421, 3191 and 3200 or MATH 3195, MATH 3800 or 4810, or equivalent. Students who have a grade of B- or better in these courses pass this course at a much higher rate. Cross-listed with MATH 5390. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MATH 4394 - Experimental Designs (3 Credits)
Designs covered will include: completely randomized, complete block, split plot, incomplete block, factorial and fractional factorial designs. Additionally, power and study design for non-experimental studies will be covered. Prereq: Grade of C- or better in MATH 4387 or 5387. Cross-listed with MATH 5394. Term offered: spring of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 4387 or 5387
Typically Offered: Spring.

MATH 4408 - Applied Graph Theory (3 Credits)
Introduces discrete structures and applications of graph theory to computer science, engineering, operations research, social science, and biology. Topics include connectivity, coloring, trees, Euler and Hamiltonian paths and circuits, matching and covering problems, shortest route and network flows. Prereq: MATH 2511 or CSCI 2511 or MATH 3000 with a C- or higher. Note: This course assumes that students have taken MATH/CSCI 2511 or MATH 3000. Students who have a grade of B- or better in MATH/CSCI 2511 or MATH 3000 pass this course at a much higher rateCross-listed with CSCI 4408 and MCKE 5408. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2511 or CSCI 2511 or MATH 3000 with a C- or higher.
Typically Offered: Spring.

MATH 4409 - Applied Combinatorics (3 Credits)
Every other year. Major emphasis is on applied combinatorics and combinatorial algorithms, with applications in computer science and operations. Topics include general counting methods, generating functions, recurrence relations, inclusion-exclusion, and block designs. Prereq: MATH 3000 with a C- or higher. Note: This course assumes that students have taken MATH 3000. Students who have a grade of B- or better in MATH 3000 pass this course at a much higher rate. Cross-listed with MCKE 5409. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 3000 with a C- or higher.
Typically Offered: Fall.

MATH 4450 - Complex Variables (3 Credits)
Infrequent. Topics include complex algebra, Cauchy-Riemann equations, Laurent expansions, theory of residues, complex integration, and introduction to conformal mapping. Note: This course assumes that students have taken MATH 2421 and MATH 3000. Students who have a grade of B- or better in MATH 2421 and MATH 3000 pass this course at a much higher rate. Term offered: spring of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 4650 - Numerical Analysis I (3 Credits)
A first semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Rounding errors and numerical stability of algorithms; solution of linear and nonlinear equations; data modeling with interpolation and least-squares; and optimization methods. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CSCI 1410). Prereq: MATH 3191 or MATH 3195 with a C- or higher. Cross-listed with CSCI 4650, 5660, and MATH 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 or MATH 3195 with a C- or higher.
Typically Offered: Fall, Spring.

MATH 4660 - Numerical Analysis II (3 Credits)
A second semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Numerical differentiation and integration; random numbers and stochastic modeling; Fast Fourier Transform; data compression; eigenvalues and singular value decompositions with application to regression and dimension reduction. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CS 1410). Prereq: MATH 3191 and MATH 3200 with a C- or higher or MATH 3195 with a C- or higher. Cross-listed with MATH 5661, CSCI 4660 and 5661. Term offered: spring of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 and MATH 3200 with a C- or higher or MATH 3195 with a C- or higher.
Typically Offered: Spring.

MATH 4733 - Partial Differential Equations (3 Credits)
Infrequent. Initial/Boundary value problems for first-order, wave, heat and Laplace Equations; maximum principles; Fourier Series and applications. Note: This course assumes that students have taken MATH 2421 and MATH 3200, and either have taken MATH 3000 or have experience with partial differential equations in engineering or physics. Students who have a grade of B- or better in MATH 2421 and MATH 3200 pass this course at a much higher rate. Cross-listed with MATH 5733. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 4779 - Math Clinic (3 Credits)
The clinic is intended to illustrate the applicability and utility of mathematical concepts. Research problems investigated originate from a variety of sources--industry, government agencies, educational institutions, or nonprofit organizations. Prereq: MATH 3191, either MATH 1376 or CSCI 1410/1411, and 6 additional credit hours in upper-division MATH courses, all with C- or higher. Cross-listed with MATH 5779. Term offered: fall, spring. Repeatable. Max Hours: 99 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 99.
Prereq: MATH 3191, either MATH 1376 or CSCI 1410/1411, and 6 additional credit hours in upper-division MATH courses, all with C- or higher.
Typically Offered: Fall, Spring.

MATH 4791 - Continuous Modeling (3 Credits)
Every other year. Surveys mathematical problems that arise in natural sciences and engineering. Topics may include population models, epidemic models, mechanics, heat transfer and diffusion, tomography, pharmaco-kinetics, traffic flow, fractal models, wave phenomena, and natural resource management. Most models discussed are based on differential and integral equations. Emphasis is formulation and validation of models as well as methods of solution. Note: This course assumes that students have taken MATH 3191 and MATH 3200. Students who have a grade of B- or better in MATH 3191 and MATH 3200 pass this course at a much higher rate. Cross-listed with MATH 5791. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4792 - Probabilistic Modeling (3 Credits)
Every other year. Markov chains; Poisson processes, continuous time Markov chains, elementary topics in queuing theory, and some mathematical aspects of Monte Carlo simulation, including random variate generation, variance reduction, and output analysis. Note: This course assumes that students have taken MATH 4810 or 5310 and have some programming experience. Students who have a grade of B- or better in MATH 4810 or 5310 pass this course at a much higher rate. Cross-listed with MATH 5792. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

MATH 4793 - Discrete Math Modeling (3 Credits)
Every other year. Focuses on the use of graph theory and combinatorics to solve problems in a wide variety of disciplines. Applications are selected from computer science, communication networks, economics, operations research, and the social, biological and environmental sciences. Note: This course assumes that students have taken MATH 3191 and MATH 4408. Students who have a grade of B- or better in MATH 3191 and MATH 4408 pass this course at a much higher rate. Cross-listed with MATH 5793. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4794 - Optimization Modeling (3 Credits)
Every other year. Principles of model formulation and analysis are developed by presenting a wide variety of applications, both for natural phenomena and social systems. Examples of optimization models to represent natural phenomena include principles of least time and energy. Examples in social systems include resource allocation, environmental control and land management. Specific applications vary, but are chosen to cover a wide scope that considers dichotomies, such as discrete vs. continuous, static vs. dynamic, and deterministic vs. stochastic. Some computer modeling language (like GAMS) is taught. Note: This course assumes that students have taken MATH 2421 and MATH 3191. Students who have a grade of B- or better in MATH 2421 and MATH 3191 pass this course at a much higher rate. Cross-listed with MATH 5794. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4820 - Introduction to Mathematical Statistics (3 Credits)
Sampling distributions, maximum likelihood and method of moments estimation, properties of estimators, classical methods for confidence intervals and hypothesis testing, simple linear regression. Prereq: Grade of C- or better in MATH 3800 or MATH 4810 (preferred). Note: Students who have a grade of A in MATH 3800 or a B- or better in MATH 4810 pass this course at a much higher rate. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 3800 or MATH 4810
Typically Offered: Spring.

MATH 4830 - Applied Statistics (3 Credits)
Review of estimation, confidence intervals and hypothesis testing; Anova; categorical data analysis; non-parametric tests; linear and logistic regression. No co-credit with MATH 4387 or 5387. This course will not satisfy the requirements for a major in Mathematics. Cross-listed with MATH 5830. Prereq: MATH 2830 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2830 with a C- or higher.
Typically Offered: Spring.

MATH 4840 - Independent Study (1-3 Credits)
Variable credit depending on the student's needs. Offered for the advanced student who desires to pursue a specific topic in considerable depth. Note: Supervision by a full-time faculty member is necessary, and the dean's office must concur. Students may register for this course more than once with departmental approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MATH 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Mathematics, BS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 45 credit hours, including a minimum of 42 MATH credit hours.
2. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 upper-division level MATH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must complete at least 15 of their upper-division level MATH credits with CU Denver faculty.
2. Students may not use any of the following MATH courses to count toward major requirements:

    - MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis
    - MATH 3195 Linear Algebra and Differential Equations
    - MATH 3511 Mathematics of Chemistry
    - MATH 3800 Probability and Statistics for Engineers
    - MATH 4830 Applied Statistics

Code	Title	Hours
Complete the following program requirements:		**45**
Complete one of the following programming options:		*3-4*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
Complete all of the following required Mathematics courses:		*27*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	

MATH 4779	Math Clinic	
or MATH 6330	Workshop in Statistical Consulting	
Complete five MATH elective courses (at least 15 credit hours) above the 3000 level, excluding MATH 3041, MATH 3195, MATH 3511, MATH 3800, MATH 4015, and MATH 4830.		*15*

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Mathematics - Applied Option, BS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 54 credit hours, including a minimum of 42 MATH credit hours and a minimum of nine credit hours in ancillary coursework.
2. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 upper-division level MATH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must complete at least 15 of their upper-division level MATH credits with CU Denver faculty.
2. Students may not use any of the following MATH courses to count toward major requirements:
    - MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis
    - MATH 3195 Linear Algebra and Differential Equations
    - MATH 3511 Mathematics of Chemistry
    - MATH 3800 Probability and Statistics for Engineers
    - MATH 4830 Applied Statistics

Code	Title	Hours
Complete the following program requirements:		**54**
Complete one of the following programming options:		*3-4*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
Complete all of the following required Mathematics courses:		*36*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3200	Elementary Differential Equations	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	
MATH 4650	Numerical Analysis I	
MATH 4733	Partial Differential Equations	
MATH 4779	Math Clinic	
Complete two approved MATH electives (at least six credit hours) above the 3000 level, excluding MATH 3041, MATH 3195, MATH 3511, MATH 3800, MATH 4015, and MATH 4830.		*6*
Complete 9 additional credits (typically 3 courses), countable towards a major in one of the following subjects, at any level:		*9*
Business (p.)		
Biology (p. 668)		
Chemistry (p. 668)		
Computer Science (p. 669)		
Economics (p. 669)		
Geography and Environmental Science (p. 669)		
Health and Behavioral Science (p. 669)		
Physics (p.)		
Sociology (p. 669)		

Business

- Accounting, BS in Business Administration (p. 163)
- Entrepreneurship, BS in Business Administration (p. 164)
- Finance, BS in Business Administration (p. 165)
- Financial Management, BS in Business Administration (p. 166)
- Human Resources Management, BS in Business Administration (p. 167)
- Information Systems, BS in Business Administration (p. 168)
- International Business, BS in Business Administration (p. 170)
- Management, BS in Business Administration (p. 171)
- Marketing, BS in Business Administration (p. 172)
- Risk Management and Insurance, BS in Business Administration (p. 173)
- Sports Business, BS in Business Administration (p. 175)

Biology

- Biology, BS (p. 619)

Chemistry

- Chemistry, BS (p. 409)

Computer Science

- Computer Science, BA (p. 338)
- Computer Science, BS (p. 340)

Economics

- Economics, BA (p. 457)

Geography and Environmental Science

- Geography - Environment, Society and Sustainability Option, BA (p. 520)
- Geography - Environmental Science Option, BA (p. 522)
- Geography - Urban Studies and Planning, BA (p. 526)

Health and Behavioral Science

- Public Health, BA (p. 543)
- Public Health, BS (p. 546)

Physics

- Physics - Pure and Applied Physics Option, BS (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-pure-applied-physics-option-bs/)

Sociology

- Sociology - Gender and Society Concentration, BA (p. 837)
- Sociology, BA (p. 836)

Other areas allowable on a case-by-case basis.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Mathematics - Data Science Option, BS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 54 credit hours, including a minimum of 42 MATH credit hours and 9 credit hours in ancillary coursework.
2. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 upper-division level MATH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students may not use any of the following MATH courses to count toward major requirements:
    - MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis
    - MATH 3195 Linear Algebra and Differential Equations
    - MATH 3511 Mathematics of Chemistry
    - MATH 3800 Probability and Statistics for Engineers
    - MATH 4830 Applied Statistics

Code	Title	Hours
Complete the following program requirements:		**54**
Complete one of the following programming options:		*3-4*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
Complete all of the following required Mathematics courses:		*33*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3376	Data Wrangling & Visualization	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	
MATH 4387	Applied Regression Analysis	
MATH 4779	Math Clinic	
Complete one of the following Machine Learning courses:		*3*
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4388	Machine Learning Methods	
Complete two MATH elective courses (at least six credit hours) above the 3000 level, excluding MATH 3041, MATH 3195, MATH 3511, MATH 3800, MATH 4015, and MATH 4830.		*6*
Complete 9 additional credit hours (typically 3 courses), countable towards a major in one of the following subjects, at any level:		*9*
Business (p. 670)		
Biology (p. 671)		
Chemistry (p. 671)		
Computer Science (p. 671)		
Economics (p. 671)		
Geography and Environmental Science (p. 671)		
Health and Behavioral Science (p. 671)		
Physics (p. 671)		
Sociology (p. 671)		

Business

- Accounting, BS in Business Administration (p. 163)
- Entrepreneurship, BS in Business Administration (p. 164)
- Finance, BS in Business Administration (p. 165)
- Financial Management, BS in Business Administration (p. 166)
- Human Resources Management, BS in Business Administration (p. 167)
- Information Systems, BS in Business Administration (p. 168)
- International Business, BS in Business Administration (p. 170)
- Management, BS in Business Administration (p. 171)
- Marketing, BS in Business Administration (p. 172)
- Risk Management and Insurance, BS in Business Administration (p. 173)

- Sports Business, BS in Business Administration (p. 175)

Biology

- Biology, BS (p. 619)

Chemistry

- Chemistry, BS (p. 409)

Computer Science

- Computer Science, BA (p. 338)
- Computer Science, BS (p. 340)

Economics

- Economics, BA (p. 457)

Geography and Environmental Science

- Geography - Environment, Society and Sustainability Option, BA (p. 520)
- Geography - Environmental Science Option, BA (p. 522)
- Geography - Urban Studies and Planning, BA (p. 526)
- Geography, BA (p. 517)

Health and Behavioral Science

- Public Health, BA (p. 543)
- Public Health, BS (p. 546)

Physics

- Physics - Pure and Applied Physics Option, BS (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-pure-applied-physics-option-bs/)

Sociology

- Sociology - Gender and Society Concentration, BA (p. 837)
- Sociology, BA (p. 836)

Other areas allowable on a case-by-case basis.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Mathematics - Probability and Statistics Option, BS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click her (p. 109)e (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 54 credit hours, including a minimum of 42 MATH credit hours and nine credit hours in ancillary coursework.
2. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 15 upper-division level MATH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must complete at least 15 of their upper-division level MATH credits with CU Denver faculty.
2. Students may not use any of the following MATH courses to count toward major requirements:

    - MATH 3041 Fundamental Mathematics: Algebra, Probability and Data Analysis
    - MATH 3195 Linear Algebra and Differential Equations
    - MATH 3511 Mathematics of Chemistry
    - MATH 3800 Probability and Statistics for Engineers
    - MATH 4830 Applied Statistics

Code	Title	Hours
Complete the following program requirements:		**54**
Complete one of the following programming options:		*3-4*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
Complete all of the following required Mathematics courses:		*33*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3382	Statistical Theory	

MATH 3810	Introduction to Probability	
MATH 4310	Introduction to Real Analysis I	
MATH 4387	Applied Regression Analysis	
MATH 4779	Math Clinic	
or MATH 6330	Workshop in Statistical Consulting	
Complete one of the following Probability and Statistics courses:		*3*
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4388	Machine Learning Methods	
MATH 4390	Game Theory	
MATH 4394	Experimental Designs	
MATH 4792	Probabilistic Modeling	
ECON 4030	Data Analysis with SAS	
Complete two MATH elective courses (at least six credit hours) above the 3000 level, excluding MATH 3041, MATH 3195, MATH 3511, MATH 3800, MATH 4015, and MATH 4830.		*6*
Complete 9 additional credit hours (typically 3 courses), countable towards a major in one of the following subjects, at any level:		*9*
Business (p. 673)		
Biology (p. 673)		
Chemistry (p. 673)		
Computer Science (p. 673)		
Economics (p. 673)		
Geography and Environmental Science (p. 673)		
Health and Behavioral Science (p. 674)		
Physics (p. 674)		
Sociology (p. 674)		

Business

- Accounting, BS in Business Administration (p. 163)
- Entrepreneurship, BS in Business Administration (p. 164)
- Finance, BS in Business Administration (p. 165)
- Financial Management, BS in Business Administration (p. 166)
- Human Resources Management, BS in Business Administration (p. 167)
- Information Systems, BS in Business Administration (p. 168)
- International Business, BS in Business Administration (p. 170)
- Management, BS in Business Administration (p. 171)
- Marketing, BS in Business Administration (p. 172)
- Risk Management and Insurance, BS in Business Administration (p. 173)
- Sports Business, BS in Business Administration (p. 175)

Biology

- Biology, BS (p. 619)

Chemistry

- Chemistry, BS (p. 409)

Computer Science

- Computer Science, BA (p. 338)
- Computer Science, BS (p. 340)

Economics

- Economics, BA (p. 457)

Geography and Environmental Science

- Geography - Environment, Society and Sustainability Option, BA (p. 520)
- Geography - Environmental Science Option, BA (p. 522)

- Geography - Urban Studies and Planning, BA (p. 526)
- Geography, BA (p. 517)

Health and Behavioral Science

- Public Health, BA (p. 543)
- Public Health, BS (p. 546)

Physics

- Physics - Pure and Applied Physics Option, BS (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-pure-applied-physics-option-bs/)

Sociology

- Sociology - Gender and Society Concentration, BA (p. 837)
- Sociology, BA (p. 836)

Other areas allowable on a case-by-case basis.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Mathematics, 4+1 BS/ Applied Mathematics, MS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

This is a unique program where a student can obtain both a BS in Mathematics and MS in Applied Mathematics in five years through a specialized course sequence. The program requires 12 fewer credits than if both degrees were earned separately.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

This is an on-campus program.

Declaring This Major

Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BS degree in Mathematics, (p. 666) they may also complete some of the requirements for an MS degree in Applied Mathematics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/applied-mathematics-ms/) by participating in the BS/MS program using the following guidelines:

1. The student must apply and be accepted for participation in the BS/MS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students should declare their intent to complete this program in their junior or senior year to the Director of the Program in Applied Mathematics after completing MATH 1401 Calculus I, MATH 2411 Calculus II, MATH 2421 Calculus III, MATH 3000 Introduction to Abstract Mathematics, MATH 3191 Applied Linear Algebra, MATH 4310 Introduction to Real Analysis I. A 3.0 grade point average (GPA) is required over all mathematics courses.
3. Students must complete a total of 45 credit hours, including a minimum of 42 MATH credit hours.
4. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
5. Students must earn a minimum grade of C- (1.7) in all undergraduate courses that apply to the major and must achieve a minimum cumulative undergraduate major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Students must earn a minimum grade of B- (2.7) in all graduate courses and must achieve a minimum cumulative major GPA of 3.0, for all courses that will apply to the MS. Courses taken using P+/P/F or S/U grading cannot apply to major and graduate requirements.
6. Students must complete a minimum of 15 upper-division level MATH credit hours and all graduate level credit hours with CU Denver faculty.
7. Students must complete a 4+1 intent form (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-bs/BMA_form_1_1_.pdf) to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Students must apply and be accepted to the Applied Mathematics, MS during the last semester of their undergraduate career. A maximum of 12 credit hours of graduate level courses that are applied to the undergraduate degree will apply to the graduate degree.
8. Students will be advised to take MATH 4320 Introduction to Real Analysis II as an elective for the B.S.
9. In the semester in which the student intends to complete their BS, students must apply for admission into MS degree in Applied Mathematics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/applied-mathematics-ms/). Students must complete either the requirements for the M.S. degree without concentration area or specific coursework requirements in one of the following areas: Applied Probability, Applied Statistics, Discrete Mathematics, Mathematics of Engineering and Science, Numerical Analysis, or Operations Research.
10. The following MATH courses will **not** count toward a graduate degree: MCKE 5000 Algebraic Patterns and Functions I-MCKE 5009 Math Modeling–Using and Applying Math, MATH 5010 History of Mathematics, MATH 5012 An Advanced Perspective on Number and

Operation-MATH 5015 Capstone Course for Secondary Teachers, MATH 5017 Topics in Mathematics for Teachers, MATH 5198 Mathematics for Bioscientists, and MATH 5830 Applied Statistics.

Mathematics, BS Course Requirements

Programming Requirements

Code	Title	Hours
Complete one of the following programming requirements:		*3-4*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	

Mathematics Courses

Code	Title	Hours
Complete all of the following Mathematics courses:		*24*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	

Electives

Code	Title	Hours
Complete two approved MATH electives (at least six semester hours) above the 3000 level, excluding MATH 3195, MATH 3511, MATH 3800, MATH 3999, and MATH 4830.		*6*
MATH 3200	Elementary Differential Equations	
MATH 3301	Introduction to Optimization	
MATH 3302	Simulation in Operations Research	
MATH 3376	Data Wrangling & Visualization	
MATH 3440	Introduction to Symbolic Logic	
MATH 3810	Introduction to Probability	
MATH 4010	History of Mathematics	
MATH 4027	Topics in Mathematics	
MATH 4110	Theory of Numbers	
MATH 4140	Introduction to Modern Algebra	
MATH 4320	Introduction to Real Analysis II	
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4387	Applied Regression Analysis	
MATH 4388	Machine Learning Methods	
MATH 4390	Game Theory	
MATH 4394	Experimental Designs	
MATH 4408	Applied Graph Theory	
MATH 4409	Applied Combinatorics	
MATH 4450	Complex Variables	
MATH 4650	Numerical Analysis I	
MATH 4660	Numerical Analysis II	
MATH 4733	Partial Differential Equations	
MATH 4791	Continuous Modeling	
MATH 4792	Probabilistic Modeling	

MATH 4793	Discrete Math Modeling
MATH 4794	Optimization Modeling

MATH numbered 5000 or above

Note that these courses taken during the undergraduate career with be used for the B.S. and apply to the 30 hours of course work and satisfy the core requirement for the Applied Mathematics.

Code	Title	Hours
Complete the following:		*12*
MATH 5779	Math Clinic	
or MATH 6330	Workshop in Statistical Consulting	
Complete nine semester hours of MATH numbered 5000 or above from the list below.		
MATH 5070	Applied Analysis	
or MATH 6131	Real Analysis	
MATH 5135	Functions of a Complex Variable	
MATH 5310	Probability	
MATH 5320	Statistical Inference	
MATH 5387	Applied Regression Analysis	
MATH 5390	Game Theory	
MATH 5394	Experimental Designs	
MATH 5490	Network Flows	
MATH 5593	Linear Programming	
MATH 5660	Numerical Analysis I	
MATH 5661	Numerical Analysis II	
MATH 5733	Partial Differential Equations	
MATH 5792	Probabilistic Modeling	
MATH 5793	Discrete Math Modeling	
MATH 5794	Optimization Modeling	
MATH 6023	Topics in Discrete Math	
MATH 6101	Uncertainty Quantification	
MATH 6131	Real Analysis	
MATH 6360	Exploratory Data Analysis	
MATH 6376	Statistical Computing	
MATH 6380	Stochastic Processes	
MATH 6384	Spatial Data Analysis	
MATH 6388	Statistical and Machine Learning	
MATH 6395	Multivariate Methods	
MATH 6398	Calculus of Variations and Optimal Control	
MATH 6404	Applied Graph Theory	
MATH 6595	Nonlinear Programming	
MATH 6653	Introduction to Finite Element Methods	
MATH 6735	Continuum Mechanics	
MATH 6960	Research Methods in Mathematics and Statistics	

To learn more about the undergraduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To learn more about the graduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/ms-applied-mathematics-program-goals-objectives/).

Mathematics, 4+1 Year BS/ Statistics, MS

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

This is a unique program where a student can obtain both a BS in Mathematics and MS in Statistics in five years through a specialized course sequence. The program requires 12 fewer credits than if both degrees were earned separately.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BS degree in Mathematics (p. 666), they may also complete some of the requirements for an MS degree in Statistics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/statistics-ms/#degreerequirementstext) by participating in the BS/MS program using the following guidelines:

1. The student must apply and be accepted for participation in the BS/MS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students should declare their intent to complete this program in their junior or senior year to the Director of the Program in Statistics after completing MATH 1401 Calculus I, MATH 2411 Calculus II, MATH 2421 Calculus III, MATH 3000 Introduction to Abstract Mathematics, MATH 3191 Applied Linear Algebra, MATH 3382 Statistical Theory. A 3.0 grade point average (GPA) is required over all mathematics courses.
3. Students must complete a total of 45 credit hours, including a minimum of 42 MATH credit hours.
4. Students must complete at least 30 upper-division (3000-level and above) credit hours in the major.
5. Students must earn a minimum grade of C- (1.7) in all undergraduate courses that apply to the major and must achieve a minimum cumulative undergraduate major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Students must earn a minimum grade of B- (2.7) in all graduate courses and must achieve a minimum cumulative major GPA of 3.0, for all courses that will apply to the MS. Courses taken using P+/P/F or S/U grading cannot apply to major and graduate requirements.
6. Students must complete a minimum of 15 upper-division level MATH credit hours and all graduate level credit hours with CU Denver faculty.
7. Up to 12 semester hours of graduate-level course work may be taken as an undergraduate and applied toward the MS degree in Statistics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/statistics-ms/#degreerequirementstext).
8. In the semester in which the student intends to complete their BS, students must apply for admission into MS degree in Statistics (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/mathematical-statistical-sciences/statistics-ms/#degreerequirementstext).
9. Students must complete a 4+1 intent form (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-bs/BMA_form_1_1_.pdf) to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Students must apply and be accepted to the Statistics, MS during the last semester of their undergraduate career. A maximum of 12 credit hours of graduate level courses that are applied to the undergraduate degree will apply to the graduate degree.

Mathematics, BS Course Requirements

Programming Courses

Code	Title	Hours
Complete one of the following programming requirements:		*3-4*
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
MATH 1376	Programming for Data Science	

Mathematics Courses

Code	Title	Hours
Complete all of the following Mathematics courses:		*27*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	
MATH 4779	Math Clinic	

Electives

Code	Title	Hours
Complete one approved MATH elective (at least six credit hours) above the 3000 level, excluding MATH 3041, MATH 3195, MATH 3511, MATH 3800, MATH 3999, and MATH 4830.		*3*
MATH 3200	Elementary Differential Equations	
MATH 3301	Introduction to Optimization	
MATH 3302	Simulation in Operations Research	
MATH 3376	Data Wrangling & Visualization	
MATH 3440	Introduction to Symbolic Logic	
MATH 3810	Introduction to Probability	
MATH 4010	History of Mathematics	
MATH 4027	Topics in Mathematics	
MATH 4110	Theory of Numbers	
MATH 4140	Introduction to Modern Algebra	
MATH 4320	Introduction to Real Analysis II	
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4387	Applied Regression Analysis	
MATH 4388	Machine Learning Methods	
MATH 4390	Game Theory	
MATH 4394	Experimental Designs	
MATH 4408	Applied Graph Theory	
MATH 4409	Applied Combinatorics	
MATH 4450	Complex Variables	
MATH 4650	Numerical Analysis I	
MATH 4660	Numerical Analysis II	
MATH 4733	Partial Differential Equations	
MATH 4791	Continuous Modeling	
MATH 4792	Probabilistic Modeling	
MATH 4793	Discrete Math Modeling	
MATH 4794	Optimization Modeling	

MATH numbered 5000 or above

Note that the courses below will be used to satisfy requirements for both the BS in Mathematics and the MS in Statistics.

Code	Title	Hours
Complete the following:		*9*
MATH 5310	Probability	
or MATH 5792	Probabilistic Modeling	
or MATH 6380	Stochastic Processes	
MATH 5320	Statistical Inference	
MATH 5387	Applied Regression Analysis	
Take one of		
MATH 5337	Intro to Statistical and Machine Learning	
MATH 5388	Machine Learning Methods	
MATH 5394	Experimental Designs	
MATH 5792	Probabilistic Modeling	
MATH 6101	Uncertainty Quantification	
MATH 6380	Stochastic Processes	
MATH 6384	Spatial Data Analysis	
MATH 6388	Statistical and Machine Learning	
MATH 7384	Mathematical Probability	
MATH 7386	Monte Carlo Methods	
MATH 7393	Bayesian Statistics	
MATH 7826	Topics in Probability and Statistics	

To learn more about the undergraduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To learn more about the graduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/ms-applied-mathematics-program-goals-objectives/).

Data Sciences Minor

Introduction

Please click here (p. 657) to see Mathematical and Statistical department information.

The demand for employees trained in data science has grown considerably in recent years. This minor will serve students by offering them specific training in data science.

Data science training should include components related to statistics, computing, and preferably, a specific field of application (e.g., business, biology, health, etc.). The minor is flexible in that it allows a student to get core training in data science programming and statistics, while allowing students to develop additional data science-related skills from other disciplines, or to focus on specific skills within data science.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your CLAS advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 credit hours, including a minimum of 9 MATH credit hours.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours, including a minimum of six upper-division MATH credits. Most upper-division courses have lower-division pre-requisites.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of six upper-division level MATH credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Be aware of no co-credit policies. Here is a non-exclusive list of our most common no co-credit policies: no co-credit between:
   - MATH 3800 Probability and Statistics for Engineers and MATH 3810 Introduction to Probability,
   - MATH 3195 Linear Algebra and Differential Equations and MATH 3200 Elementary Differential Equations,
   - MATH 3191 Applied Linear Algebra and MATH 3195 Linear Algebra and Differential Equations,
   - MATH 4387 Applied Regression Analysis and MATH 4830 Applied Statistics.

Code	Title	Hours
Complete the following required courses:		*12*
MATH 1376	Programming for Data Science	
or CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
or ISMG 4400	Programming Fundamentals with Python	
MATH 2830	Introductory Statistics	
or MATH 3382	Statistical Theory	
or MATH 3800	Probability and Statistics for Engineers	
MATH 3376	Data Wrangling & Visualization	
MATH 4830	Applied Statistics	
or MATH 4387	Applied Regression Analysis	

Complete six credit hours of electives from the following list of approved courses:		*6*
MATH 3191	Applied Linear Algebra	
MATH 3195	Linear Algebra and Differential Equations	
MATH 3200	Elementary Differential Equations	
MATH 3301	Introduction to Optimization	
MATH 3302	Simulation in Operations Research	
MATH 3810	Introduction to Probability	
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4388	Machine Learning Methods	
MATH 4390	Game Theory	
MATH 4394	Experimental Designs	
MATH 4408	Applied Graph Theory	
MATH 4650	Numerical Analysis I	
MATH 4660	Numerical Analysis II	
MATH 4733	Partial Differential Equations	
MATH 4791	Continuous Modeling	
MATH 4792	Probabilistic Modeling	
MATH 4793	Discrete Math Modeling	
MATH 4794	Optimization Modeling	
MATH 6330	Workshop in Statistical Consulting	
ECON 4030	Data Analysis with SAS	
ECON 4811	Introduction to Econometrics	
CHEM 4521	Physical Chemistry: Quantum and Spectroscopy	
CHEM 4580	Molecular Informatics	
CHEM 4640	Artificial Intelligence in Chemistry and Biochemistry	
CHEM 4845	Molecular Modeling and Drug Design	
CSCI 3287	Database System Concepts	
CSCI 3963	Network Structures	
CSCI 4455	Data Mining	
CSCI 4580	Data Science	
CSCI 4788	Bioinformatics	
CSCI 4930	Machine Learning	
CSCI 4931	Deep Learning	
CSCI 4951	Big Data Systems	
GEOG 4070	Remote Sensing II: Advanced Remote Sensing	
GEOG 4080	Introduction to GIS	
GEOG 4081	Cartography	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4090	Environmental Modeling with Geographic Information Systems	
GEOG 4091	Open Source Software for Geospatial Applications	
GEOG 4092	GIS Programming and Automation	
GEOG 4095	Deploying GIS Functionality on the Web	
GEOG 4235	GIS Applications in the Health Sciences	
ISMG 3000	Technology In Business	
ISMG 3500	Business Data and Database Management	
Total Hours		**18**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

Mathematics Minor

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 21 MATH credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) MATH credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum six MATH upper-division level credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Be aware of no co-credit policies. Here is a non-exclusive list of our most common no co-credit policies: no co-credit between
   - MATH 3800 Probability and Statistics for Engineers and MATH 3810 Introduction to Probability,
   - MATH 3195 Linear Algebra and Differential Equations and MATH 3200 Elementary Differential Equations,
   - MATH 3191 Applied Linear Algebra and MATH 3195 Linear Algebra and Differential Equations,
   - MATH 4387 Applied Regression Analysis and MATH 4830 Applied Statistics.
2. For slash-listed courses:
   - MATH 3440 Introduction to Symbolic Logic/PHIL 3440 Introduction to Symbolic Logic.
   - MATH 4408 Applied Graph Theory/CSCI 4408 Applied Graph Theory,
   - MATH 4650 Numerical Analysis I/CSCI 4650 Numerical Analysis I, and
   - MATH 4660 Numerical Analysis II/CSCI 4660 Numerical Analysis II, one can take either the MATH section or the slash-listed section of the course. Either one count towards the minor in MATH.

Code	Title	Hours
Complete the following program requirements:		
Complete all of the following required courses:		*12*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
Complete three upper-division level (3000 level or higher) MATH courses worth three or more credit hours each.		*9*
Total Hours		**21**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

Applied Statistics Undergraduate Certificate

Introduction

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

There is a growing need for qualified statistical analysts of the ever-increasing amounts of data collected in business, industry, and government. The Certificate in Applied Statistics program is designed to give students a strong background in statistical methodology and data analysis in preparation for opportunities in the workforce or for graduate studies.

Students will gain competence in such topics as descriptive statistics, estimation, confidence intervals, probability and inferential techniques, simple and multiple regression, analysis of variance, and more advanced topics. Students can focus on a particular application area such as economics, psychology, sociology, geology or environmental science through the choice of an elective course and the data analysis project.

Programs are offered at the undergraduate and graduate level.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- Admission requirements: Completion of calculus I, II and III as well as linear algebra, each at a B- or above. Students enrolled in the certificate program will be expected to utilize concepts from calculus and linear algebra without the use of technology, e.g., evaluation of limits, derivatives and integrals.
- The certificate can be declared by contacting the Director of Statistical Programs.
  Coordinator: Joshua French Ph.D.
  E-mail: Joshua.French@ucdenver.edu
  Web site: https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-certificate-applied-statistics (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-certificate-applied-statistics/)

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Applied Statistics advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Certificate Requirements

1. Students must complete a minimum of 12 credits hours.
2. All credits for the certificate must be taken at the upper division level (3000-level and above).
3. Students must earn a minimum grade of B-(2.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Since a certificate is a University of Colorado Denver certification of a student's specialized knowledge in an advanced subject area, all courses in the certificate program are expected to be taken in residency at the University of Colorado Denver.

Program Restrictions, Allowances and Recommendations

1. Students must be enrolled in one course per year to maintain their status in the certificate program.
2. Certificates must be completed within three years from matriculation.

Code	Title	Hours
Complete the following required courses:		*9*
Fundamental course in probability		
MATH 3810	Introduction to Probability (recommended)	
or MATH 3800	Probability and Statistics for Engineers	
Fundamental course in mathematical statistics		
MATH 3382	Statistical Theory	

Advanced applications course		
MATH 4387	Applied Regression Analysis	
Complete three credits from the following elective courses:		*3*
Any statistics course in the Department of Mathematical and Statistical Sciences at the 4000 level or higher, pre-approved by the Director of Statistical Programs. [1]		
ECON 4030	Data Analysis with SAS	
ECON 4150	Economic Forecasting	
ECON 4811	Introduction to Econometrics	
Total Hours		**12**

[1] MATH 4830 Applied Statistics cannot apply toward the certificate.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-certificate-applied-statistics/).

Data Science Undergraduate Certificate

Please click here (p. 657) to see Mathematical and Statistical Sciences department information.

Introduction

Data scientists will have essential competencies in several areas related to analysis of data. In particular, a data scientist should: have strong programming ability in a language popular in data science (e.g., Python, R, Julia); be able to extract, manipulate, and visualize data; have an understanding of probability and statistics in order to quantify uncertainty; be able to build complex models for finding patterns and explaining data. This certificate should provide students with essential skills for introductory data science.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- See the program advisor for an application form.

Coordinator: Adam Spiegler Ph.D.
Telephone: 303-315-1700
E-mail: math.advising@ucdenver.edu

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Data Science advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete a minimum of six upper division (3000-level and above) credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.25. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete a minimum of nine upper division level credit hours with CU Denver faculty.

Code	Title	Hours
In order to ensure adequate programming skills for data science, students complete one of the following courses that develops strong programming skills in a programming language popular in data science (e.g., Python, R, Julia).		*3*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
MATH 4650	Numerical Analysis I	
ISMG 4400	Programming Fundamentals with Python	
In order to ensure that students can accurately quantify the likelihood of various outcomes and quantify uncertainty related to estimation and prediction, students complete one of the following courses that covers basic probability and statistics.		*3*
MATH 2830	Introductory Statistics	
MATH 3382	Statistical Theory	
MATH 3800	Probability and Statistics for Engineers	
In order to ensure that students are able to comfortably work with and visualize data, students complete the following course, developing skills related to obtaining, manipulating, and visualizing data.		*3*
MATH 3376	Data Wrangling & Visualization	
In order to ensure that students are able to build reasonably complex models for explaining or identifying patterns in data, students take one of the following courses that largely focuses on describing the behavior of data (whether synthetic or observed) via tools like simulation, direct model building, association, or a complementary approach.		*3*
MATH 3301	Introduction to Optimization	
MATH 4387	Applied Regression Analysis	
MATH 4830	Applied Statistics	
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-certificate-data-science-essentials/).

Modern Languages

Chair: Devin Jenkins
Program Assistant: Niki Mott
Office: Plaza Building, Room 118
Mailing Address:
Campus Box 178
P.O. Box 173364
Denver, CO 80217-3364
Telephone: 303-315-7234
Fax: 303-315-7233

Overview

General Information

The Department of Modern Languages includes Arabic, Chinese, French, German, Latin and Spanish. Major is available in Spanish, and minors are available in Chinese Studies, French, Linguistics, and Spanish. Certificates are available in Chinese for International Business, Spanish for International Business, and Spanish for the Healthcare Professions. Students must declare a major prior to their final semester of coursework. The department recommends that majors and minors include some study abroad while they are fulfilling their degree requirements at CU Denver. Please see a departmental advisor about study abroad opportunities. Credit earned abroad will normally count toward satisfaction of the major and minor requirements at CU Denver, but to assure full transfer of credit, students must see an advisor in the department before enrolling in programs abroad. Courses taken abroad and designated as upper division in Chinese, French, German or Spanish are subject to study abroad and transfer credit policies.

Departmental Honors

Students who meet certain criteria and have been invited by the faculty of the appropriate language are encouraged to participate in the Department of Modern Languages honors program. Successful completion of this program by students majoring in Spanish leads to graduation with the distinction of *cum laude*, *magna cum laude* or *summa cum laude*.

Honors in Spanish

Students who complete all the requirements for Spanish Language, Literature and Culture, BA (p. 712), Spanish Language, Literature and Culture, BA with Secondary Teaching Licensure Endorsement (p. 715) or Spanish, International Language and Culture for the Professions Option, BA (p. 718), meet the following criteria and have been invited by the Spanish faculty are encouraged to participate in the honors program. Successful completion of this program by students majoring in Spanish leads to graduation with the distinction of *cum laude*, *magna cum laude* or *summa cum laude*.

CUM LAUDE:

1. Overall CU GPA of 3.5 or better and Spanish GPA of 3.8 or better OR
2. Overall CU GPA or 3.2 or better and Spanish GPA of 3.5 or better and

   Three credit hours of SPAN 4840 Independent Study: SPAN . The candidate must present the independent study topic for approval by the faculty honors committee by the end of the semester that precedes commencement of the project. At the end of the independent study project, and at least one month before the end of the semester, the candidate shall deliver an ***oral presentation*** based on the project to the faculty honors committee.

MAGNA CUM LAUDE AND *SUMMA CUM LAUDE*:

1. Overall CU GPA of 3.5 or better and Spanish GPA of 3.8 or better AND
2. ***Six credit hours of SPAN 4840 Independent Study: SPAN*** , spread over two semesters. The candidate must present the independent study topic for approval by the faculty honors committee by the end of the semester that precedes commencement of the project. At the end of the independent study project, and at least one month before the end of the semester, the candidate shall submit a ***written thesis*** to the faculty honors committee.
3. The designation of magna or summa will be the decision of the faculty honors committee.

Relevance to Other Programs

In addition to fulfilling major and minor requirements, courses in the Department of Modern Languages prepare students in the language, literature and civilization of the countries and peoples they are studying. Certain courses may apply to the fulfillment of core curriculum requirements in the College of Liberal Arts and Sciences.

Second Language Requirement

All students with majors in the College of Liberal Arts and Sciences must demonstrate proficiency in a second language at the second semester level. This is accomplished through course work, by examination or by completion of second-year high school credit. Students must receive a grade of C- (1.7) or higher in the final semester of the second-year course in high school or the second-semester college-level course in order to fulfill the second language requirement. The prerequisite for the second-semester college course is a grade of C- (1.7) or better in the first-semester course. A course used to satisfy the second language requirement cannot be completing using pass/fail grading. Visit the CLAS Second Language Proficiency (p. 376) section of this catalog for additional information for satisfying the requirement.

Students may show their level of proficiency by taking the placement/proficiency exam. Additional information for placement/proficiency exams for French, German and Spanish can be found on the CU Denver Modern Languages website or by calling the Department of Modern Languages, 303-315-7234. The number of times a student may take the exam is limited to once per semester. For all other languages, consult the CLAS Advising Office (p. 117) for information on satisfying this requirement via BYU FLATS (Foreign Language Achievement Testing Services) or CLEP.

For information on fulfilling part of the second language requirement through study abroad, please visit the Office of Global Education: Study Abroad website (https://www.ucdenver.edu/students/study-abroad/).

Department of Modern Languages Policy on Student Placement in Lower-Division Courses

A student may not enroll in a lower-division (1000/2000) language course that is below his/her level of language proficiency. Students wishing to enroll in a lower-division language course that does not directly follow their last completed course in the regular sequence must consult with an appropriate faculty member of the Department of Modern Languages prior to enrollment. Students who have achieved some proficiency in a foreign language through other means than academic courses must also consult with an appropriate faculty member of the Department of Modern Languages prior to enrollment. Call 303-315-7234 for further information.

Departmental Advising

Upon declaring a major or minor in modern languages, each student will be assigned to a faculty advisor with whom the student should consult at least once per semester thereafter. It is especially important that modern language majors have their transcripts reviewed by a departmental advisor before enrolling in their final 30 semester hours at CU Denver. Failure to do so may result in delay of graduation. Students presenting four years of high school foreign language (Level IV) for admission must see a departmental advisor before enrolling in courses for the major or minor. Students with CLEP credits or advanced placement credits from high school should see a departmental advisor about course equivalencies.

Before enrolling in their final semester, seniors demonstrate advanced oral and written proficiency in the language that they are studying through an oral proficiency interview and a written outcomes assessment exam. Students must see a departmental advisor to schedule proficiency tests in their language.

Residency Requirement

A minimum of 18 semester hours of course work leading to a major in French or Spanish must be taken from modern languages faculty at CU Denver. For a minor in Chinese, French, Linguistics or Spanish, 9 semester hours must be taken from modern languages faculty at CU Denver. Courses taken at other institutions while a student is enrolled at CU Denver may be applied to the major or minor only with departmental approval before enrollment in those courses.

Undergraduate Information

Arabic

The Department of Modern Languages offers first- and second-year Arabic courses.

Chinese

Click here (p. 721) to learn about the requirements for the Chinese Studies Minor.
Click here (p. 729) to learn about the requirements for the Chinese for International Business Undergraduate Certificate.

French

Click here (p. 723) to learn about the requirements for the French Minor.

German

The Department of Modern Languages offers first-year and other courses in German.

Linguistics

Click here (p. 724) to learn about the requirements for the Linguistics Minor.

Latin

The Department of Modern Languages offers first year and other courses in Latin.

Spanish

Click here (p. 712) to learn about the requirements for the Spanish, Language, Literature and Culture Major Option.
Click here (p. 718) to learn about the requirements for the Spanish, International Language and Culture for the Professions Major Option.
Click here (p. 715) to learn about the requirements for the Spanish, Secondary Teaching Licensure Major Option.
Click here (p. 725) to learn about the requirements for the Spanish Minor.
Click here (p. 726) to learn about the requirements for the Spanish for the Health Professions Undergraduate Certificate.
Click here (p. 728) to learn about the requirements for the Spanish for International Business Undergraduate Certificate.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/modern-languages/) catalog to read about our graduate programs.

Programs Offered

- Spanish, 4 + 1 BA/ MA (p. 707)
- Spanish Language, Literature and Culture, BA (p. 712)
- Spanish Language, Literature and Culture, BA with Secondary Teaching Licensure Endorsement (p. 715)
- Spanish, International Language and Culture for the Professions Option, BA (p. 718)
- Chinese Studies Minor (p. 721)
- French Minor (p. 723)
- Linguistics Minor (p. 724)
- Spanish Minor (p. 725)
- Spanish for the Health Professions Undergraduate Certificate (p. 726)
- Spanish for International Business Undergraduate Certificate (p. 728)
- Chinese for International Business Undergraduate Certificate (p. 729)

Arabic Faculty

Instructor:

Lizz Huntley, Ph.D, Michigan State University

Chinese Faculty

Assistant Professor and Advisor:

I-hao Victor Woo, PhD, Boston University

French Faculty

Senior Instructor and French Advisor:

Lori Willard, PhD, University of Colorado

Lecturer:

Sara Fischer, PhD, University of Colorado

German Faculty

Lecturer:

Maggie Rosenau, PhD, University of Colorado

Latin Faculty

Lecturers:

Mary De Forest, PhD, University of Colorado
Alan Sumler, PhD, City University of New York

Linguistics Faculty

ASSOCIATE PROFESSOR:

Devin Jenkins, PhD, University of New Mexico

ASSISTANT PROFESSORS:

Alyssa Martoccio, PhD, University of Illinois
I-hao Victor Woo, PhD, Boston University

ASSISTANT PROFESSOR-CLINICAL TRACK:

Gabriela de Robles, PhD, Georgetown University

INSTRUCTOR and Advisor:

Lizz Huntley, Ph.D, Michigan State University

Spanish Faculty

PROFESSOR:

Andrés Lema-Hincapié, PhD, Cornell University and PhD, University of Ottawa

Associate Professors:

Michael Abeyta, PhD, University of California-Davis
María Luisa Fernández Martínez, PhD, University of California, Irvine
Devin Jenkins, PhD, University of New Mexico

Assistant Professor:

Alyssa Martoccio, PhD, University of Illinois

ASSISTANT PROFESSOR-Clinical Track:

Gabriela de Robles, PhD, Georgetown University

Instructors:

Ileana Gross, MA, University of Georgia
Amanda Ritchie, MA, University of Akron

Undergraduate Spanish Advisors (by student's last name)

A-L:
ASSOCIATE PROFESSOR:
María Luisa Fernández Martínez, PhD, University of California, Irvine

M-Z:
ASSISTANT PROFESSOR:
Alyssa Martoccio, PhD, University of Illinois

Graduate Advisor:

PROFESSOR:
Andrés Lema-Hincapié, PhD, Cornell University and PhD, University of Ottawa

Study Abroad Advisor:

ASSOCIATE PROFESSOR:
Devin Jenkins, PhD, University of New Mexico

Internship Director:

PROFESSOR:
Andrés Lema-Hincapié, PhD, Cornell University and PhD, University of Ottawa

Emeritus Faculty:

ASSOCIATE PROFESSORS:

Linda Alcott
Kathleen Bollard
Diane Dansereau

INSTRUCTORS:

Tim Phillips
Ted Wendelin

Arabic (ARAB)

ARAB 1000 - Introduction to Cultures of the Arabic-Speaking World (3 Credits)
Introduces students to the Arabicspeaking cultures of North Africa, some Asian countries, and the Gulf States, with a focus on politics, culture, economics, literature and the arts. Taught in English. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

ARAB 1010 - Beginning Arabic I (5 Credits)
Beginning course in Modern Standard Arabic (MSA) designed for students who have not had any experience with the language. Term offered: spring, fall. Max Hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ARAB 1020 - Beginning Arabic II (5 Credits)
Beginning course in Modern Standard Arabic (MSA) designed for students who have not had any experience with the language. Note: This course assumes that students have passed ARAB 1010 or equivalent, or have taken one year of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ARAB 2110 - Intermediate Arabic I (3 Credits)
Third-semester course in Modern Standard Arabic (MSA) designed for students who have had two semesters or comparable proficiency in the language. Note: This course assumes that students have passed ARAB 1020 or equivalent, or have taken two years of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ARAB 2120 - Intermediate Arabic II (3 Credits)
Fourth-semester course in Modern Standard Arabic (MSA) designed for students who have had three semesters or comparable proficiency in the language. Note: This course assumes that students have passed ARAB 2110 or equivalent, or have taken three years of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ARAB 2840 - Independent Study (1-3 Credits)
Independent study for students wishing to pursue nonoffered studies in Arabic language and culture. Department consent required. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

ARAB 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Chinese (CHIN)

CHIN 1000 - China and the Chinese (3 Credits)
A multidisciplinary introduction to Chinese society both past and present. Prehistory, birth of imperial China, literature, philosophy, religion, nationalism, revolution, modernization, contemporary life, social structure, gender, food, family life, population policy, ethnicity, popular culture, economics and politics. Note: This course is taught in English. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

CHIN 1010 - Beginning Chinese I (5 Credits)
A basic introduction to Chinese language and culture. Students study pronunciation, vocabulary, grammar and simple writing techniques. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. No previous study of Chinese is required. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 1020 - Beginning Chinese II (5 Credits)
(Continuation of CHIN 1010.) Further practice of pronunciation, study of vocabulary, grammar, and simple writing techniques. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 1010 or equivalent, or have taken one year of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 1071 - Mandarin Chinese for the Professions (3 Credits)
Provides students with language skills and cultural knowledge in the context of conducting business with Chinese. Students develop elementary language skills for communication, cultural awareness and business etiquette via structured thematic units with business scenarios and simulations. Note: Chinese 1071 cannot be taken to fulfill language requirements; nor can it be used to substitute for Chinese 1010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

CHIN 2110 - Second Year Chinese I (3 Credits)
Continuing development of listening, speaking, reading, and writing skills in practical Chinese, with grammar review and introduction of the Chinese dictionary. In addition to contemporary Chinese, there is some emphasis on Chinese classical materials, such as proverbs. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 1020 or equivalent, or have taken two years of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 2120 - Second Year Chinese II (3 Credits)
(Continuation of CHIN 2110.) Satisfies the fourth semester language requirement at most graduate schools. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 2110 or equivalent, or have taken three years of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 2840 - Independent Study (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring.

CHIN 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

CHIN 2970 - Contemporary Chinese Cinema (3 Credits)
Introduces students to Chinese cinema, one of the most powerful and often controversial modes of representing society, culture, history and politics in China. Note: Taught in English. All films have English subtitles. No previous study of Chinese language or culture is required. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 3010 - Advanced Intermediate Chinese (3 Credits)
This course capitalizes on students' already acquired knowledge to further develop language skills in Mandarin Chinese. Students learn to make a transition from reading pedagogically prepared materials to more authentic ones. Note: this course assumes that students have passed CHIN 2120 or equivalent, or possess equivalent proficiency. A grade of C- or higher in CHIN 2120 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 3071 - Chinese for Business (3 Credits)
Chinese for International Business is a Language for Specific Purposes (LSP) course designed for students who have completed CHIN 1071 or the equivalents. The primary goal is to provide students with an opportunity to be more familiar with Chinese business operations in Chinese-speaking communities such as Mainland China, Hong Kong, Singapore, and Taiwan. The course also emphasizes the business usage and jargon in modern Chinese as well as the business-related sociocultural awareness. Through reading, discussing, and analyzing the actual cases from real foreign enterprises, students will gain in-depth knowledge about the macro and microeconomic situations in the Chinese-speaking world. In addition, within the business contexts provided by the materials, the classes will be organized and guided into a variety of language activities. Finally, the class materials are primarily presented in Pinyin and no background in Chinese characters is required. Note: The class materials are primarily presented in Pinyin and no prior background in Chinese characters is required. Prereq: CHIN1071 with a C- or higher, or the equivalents. Term Typically Offered: Fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHIN 1071 with a C- or higher, or the equivalents.
Typically Offered: Fall.

CHIN 3130 - Special Topics in Chinese (3 Credits)
Varying topics in Chinese language, literature and culture appropriate to the 3000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed CHIN 2120 or equivalent, or possess equivalent language proficiency. Note: May be taken more than once, provided that the topic is different each time. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

CHIN 3200 - Contemporary Chinese Society and Culture (3 Credits)
Provides students with an overview of the systems in modern China (such as educational, political and economical), its family and interpersonal constructs and the elements of modern China found in popular cultures. It also exposes students to rudimentary and practical use of the Chinese language. Note: This course is taught in English. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHIN 3300 - Special Topics on Chinese Film (3 Credits)
Studies the cultural, social and historical conditions that have shaped Chinese cinema. May focus on one Chinese speaking country or more than one (including but not limited to China, Taiwan and Hong Kong). May focus on a particular period (pre-Cultural revolution, for example) or a particular theme (urban cinema or martial arts films, for example). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 3840 - Independent Study: CHIN (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

CHIN 3939 - Internship - CHIN (1-3 Credits)
Department consent required. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CHIN 3995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

CHIN 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, ETST 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

CHIN 4421 - Modern China (3 Credits)
Surveys Chinese history in the modern era. Includes examination of Western domination of China; revolution and internal fragmentation of China; Japanese attacks and World War II; and civil war and the communist revolution. Cross-listed with HIST 4421, and HIST 5421. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 4423 - China in the World (3 Credits)
China does not exist apart from the world, and never has. This course approaches Chinese history by asking: how has the world shaped China's history, and how has China shaped the history of the world? Rather than explain what went on in China, we focus on exploring what went on outside-among China's immediate neighbors in East Asia, the entire Eurasian region, the African continent, and the so-called "West." The course moves chronologically from ancient times to the present, and is organized around the themes as conquest, trade, international relations, climate change, environmental stress, and the circulation of ideas. Cross-listed with HIST 4423 and HIST 5423. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 4690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 5690. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 4691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

CHIN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

French (FREN)

FREN 1000 - Introduction to Cultures of the French- Speaking World (3 Credits)
Introduces students to the many cultures of the French-speaking world. Taught in English for accessibility to students from different colleges at the University. The countries studied are: France, its overseas departments (Guadeloupe and Martinique) and territories (Tahiti); Quebec; Senegal; and other African countries. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

FREN 1001 - French Language I (4 Credits)
Introductory course in French language skills, in which basic grammatical structures are introduced, together with elementary vocabulary and cultural items that allow the student to carry on simple conversations in French. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. No previous study of French is required. No co-credit with FREN 1010. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 1002 - French Language II (4 Credits)
Second semester of elementary French language skills continuation of French Language I (FREN 1001). More complex grammatical structures are introduced together with appropriate vocabulary and cultural and literary readings that allow students to carry on more complex conversations. Note: This course assumes that students have passed FREN 1001 or 1010 or equivalent, or have taken one year of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 1020. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 1020 - Beginning French II (5 Credits)
(Continuation of FREN 1010.) More complex grammatical structures are introduced, and literary and cultural readings are added. Elementary vocabulary and cultural awareness are expanded to enable the student to carry on more complicated conversations. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed FREN 1001 or 1010 or equivalent, or have taken one year of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. This course is not intended for native speakers. Max hours: 5 Credits.
Grading Basis: Letter Grade

FREN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

FREN 2001 - Second-Year French (3 Credits)
FREN 2001 Third semester of French language skills- continuation of French Language II (FREN 1002). Further introduction to beginning & intermediate level grammatical structures with appropriate vocabulary and cultural & literary readings that allow students to understand oral & written French and to speak & write in French in everyday situations. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 2003 - French Language III (3 Credits)
Third semester of French language skills- continuation of French Language II (FREN 1002). Further introduction to beginning & intermediate level grammatical structures with appropriate vocabulary and cultural & literary readings that allow students to understand oral & written French and to speak & write in French in everyday situations. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 2110. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

FREN 2004 - French Language 4: Introduction to Advanced Studies (3 Credits)
This course is designed to review and further develop French language skills, to continue the study of Francophone cultures and to prepare students for advanced-level French studies. Note: This course assumes that students have passed FREN 2003 or 2110 or equivalent, or have taken three years of high school French, or possess equivalent proficiency. A grade of Cor higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 2020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

FREN 2110 - Intermediate French I: Grammar Review, Reading and Composition (3 Credits)
Designed to further develop all the language skills, with particular emphasis on reading and writing, and to further continue students' introduction to French culture. Students review grammar and vocabulary, read and discuss Le Petit Prince, and express their reactions to the text both orally and in writing. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. This course is not intended for native speakers. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 3010 - French Phonetics and Pronunciation (3 Credits)
Helps students acquire speech habits through knowledge of phonetics. Topics include the function of the speech organs, accurate production and recognition of sound, and the use of phonetic symbols. Note: Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3020 - Conversation through Film (3 Credits)
Conversation course focusing on the exploration of the diversity of French and Francophone cultures through film. Oral practice methodologies will include small group discussions, short oral presentations and debates. Note: Students with native or nearnative-level proficiency will not be allowed to take FREN 3020. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3050 - Advanced Grammar and Composition (3 Credits)
Rigorous review of grammar (including past and future tenses, conditional mood and nominal phrase), along with development of writing skills through analysis and discussion of selections from French writers. Through questions and written exercises, students familiarize themselves with vocabulary, spelling, syntax and grammar. Note: May be taken before or after FREN 3060. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3060 - Advanced French Language Skills (3 Credits)
Rigorous review of grammar (including subjunctive, interrogative, verbal phrase and passive voice), along with development of writing skills through analysis and discussion of selections from French writers. Through questions and written exercises, students familiarize themselves with vocabulary, spelling, and grammar. Note: May be taken before or after FREN 3050. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3112 - Survey of French Literature I (3 Credits)
Introduces survey of the major literary trends and prominent writers of French literature from 842 A.D. to the end of the 18th century. Note: May be taken before or after FREN 3122. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3120 - French Cultural Identities: Myths and Realities (3 Credits)
The self-assured demeanor of the average French man or woman both attracts and confounds. In fact, a French person's behavior -- or that of the French government -- can seem impossible to decode if not understood within an authentically French context. This course examines that context and explores how the French view everyday life. Includes analysis of classic French films. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 3122 - Survey of French Literature II (3 Credits)
Introduces survey of the major literary trends (romanticism, realism and existentialism) and writers of the 19th and 20th centuries. Students become acquainted with prominent writers of the period such as Beauvoir, Chateaubriand, Hugo, Balzac, Flaubert, Proust, Camus and Sartre. Note: May be taken before or after FREN 3112. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3130 - Current Topics of the French-Speaking World (3 Credits)
Combines discussion and writing on political, economic, and social conditions in contemporary France and the Francophone world. Articles from current French newspapers, news magazines, television broadcasts, and the World Wide Web are analyzed for a better understanding of modern French culture. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3140 - Contemporary Francophone Cultures (3 Credits)
Through the reading of short stories and cultural texts, engages students in the exploration of cultures of the Francophone world. Addresses political, economic and geographic status of each region as well as societal identity, immigration, the individual and cultural identity. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3200 - The Francophone World in the Post-Colonial Era (3 Credits)
Focuses on the many Francophone regions of the world, including (but not limited to) France, North and West Africa, Southeast Asia, and the Caribbean, and surveys a wide span of subject matter as it pertains to the post-colonial situations in these regions. Taught in English. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq: Sophomore standing or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

FREN 3840 - Independent Study: FREN (1-3 Credits)
Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

FREN 3939 - Internship (1-3 Credits)
Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

FREN 3970 - Special Topics (3 Credits)
Varying topics in French and Francophone language, literature and culture appropriate to the 3000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Note: May be taken more than once, provided that the topic is different each time. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FREN 3995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

FREN 4010 - Advanced Composition: Stylistics (3 Credits)
Focuses on improvement of writing skills and development of the student's ability to compose logically and convincingly. The writing styles to be studied include: narration, description, portrait, persuasive essay and report. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4050 - Advanced French for Business (3 Credits)
Concentrates on the technical language necessary to meet the economic and commercial needs of the modern world. Prepares students for the practical certificate of business and economic French of the Paris Chamber of Commerce. Note: Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4082 - Introduction to Translation (3 Credits)
Introduces the methodology and practice of written translation from English to French/French to English. Students will learn techniques on how to avoid word by word translation, faulty sentence structure and anglicisms by focusing on grammar, syntax and vocabulary. Note: Students must demonstrate third-year competence and advanced writing skills in English. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5082. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4200 - French Civilization Through the Nineteenth Century (3 Credits)
Development of French culture and civilization from a historical perspective, beginning with the origins of France and continuing through the 19th century. Includes historical background, sciences and techniques, daily life, the arts, literature and philosophy, and religion. Note: May be taken before or after FREN 4210. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed two 3000 level courses in French. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 4210 - French Civilization - Twentieth and Twenty-First Centuries (3 Credits)
(Continuation of FREN 4200) The development of French culture and civilization in a historical perspective from the beginning of the 20th century to the present. Includes historical background, sciences and techniques, daily life, the arts, literature and philosophy, and religion. Note: May be taken before or after FREN 4200. Note: This course assumes that students have passed two 3000 level courses in French. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4310 - Seventeenth Century Literature (3 Credits)
An in-depth study of the century considered to be the pinnacle of French theatre. Includes plays by Racine, Moliere and Corneille, as well as poetry by Lafontaine and Boileau. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4360 - Eighteenth Century Novel, Theater and Poetry (3 Credits)
Studies several novels and plays characteristic of the 18th century as well as some of the more famous poems. Includes Diderot, Rousseau, Voltaire, Marivaux and Laclos. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4430 - Nineteenth Century French Novel (3 Credits)
Development of the French novel during the 19th century. Includes such writers as Stendhal, Hugo, Balzac, George Sand, Flaubert, Maupassant and Zola. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5430. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4480 - Twentieth Century French Novel (3 Credits)
Represents novels of the 20th century, a period of great innovation in the French novel. Authors generally treated are Camus, Giono, Ernaux and Duras. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5480. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4490 - Twentieth Century French Theater (3 Credits)
Surveys the major movements in French literature of the 20th century as represented in the theater arts. Such authors as Jarry, Artaud, Apollinaire, Giraudoux, Sartre, and Beckett are discussed. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4510 - French Women Writers (3 Credits)
Designed to explore writings by French and Francophone women from the Middle Ages to the present. Addresses the question of what it means to be a woman and want to write. The selections include a wide variety of genres: autobiographical writings, stories, poems, manifestos, letters, political and historical documents. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5510 and WGST 4511/5511. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4520 - Voices of Haiti and the Caribbean (3 Credits)
This course explores the literary production of contemporary Haitian and Caribbean writers within varied cultural and gender contexts. It focuses on historical, societal and post-quake issues confronting both men and women writers of the French Caribbean. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5520. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4600 - History of the French Language (3 Credits)
Studies phonological, morphological, and syntactic changes in the language of Gaul from Latin to modern French. Note: This course assumes that students have passed FREN 3010 and FREN 3050 or 3060 or equivalent courses. Cross-listed with FREN 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

FREN 4840 - Independent Study: FREN (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FREN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

FREN 4970 - Special Topics (3 Credits)
Varying topics in French and Francophone language, literature and culture appropriate to the 4000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed two 3000 level courses in French. Note: May be taken more than once, provided that the topic is different each time. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FREN 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

German (GRMN)

GRMN 1000 - Germany and the Germans (3 Credits)
Introduces the ways in which the various aspects of German culture help define German life and national identity. By examining art, music and media, primarily of the 20th century, students explore what it means to be German. Note: Taught in English. Term offered: spring, fall. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages.
Typically Offered: Fall, Spring.

GRMN 1010 - Beginning German I (5 Credits)
Introduces basic grammar, sentence structure and speech patterns. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GRMN 1020 - Beginning German II (5 Credits)
(Continuation of GRMN 1010.) Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed GRMN 1010 or equivalent, or have taken one year of high school German, or possess equivalent proficiency. A grade of C- or higher in GRMN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GRMN 3200 - Current German Society and Culture (3 Credits)
Provides students with a detailed overview of the systems in modern, united Germany such as social, educational, and political. Examines how Germany sees itself as a vital member of the EU. Exposes students to rudimentary use of the German language. Prereq: Sophomore standing. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

GRMN 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: spring, summer, fall. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

GRMN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 4690, FREN 5690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GRMN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 4691, FREN 5691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

Greek (GREK)

GREK 1010 - Greek I: Biblical (5 Credits)
Intended for students of languages, religious studies, and philosophy. Introduces the forms and syntax of Greek so that in the 13th week students will be able to read about 85% of the New Testament in the original language. Cross-listed with RLST 1010. Max hours: 5 Credits.
Grading Basis: Letter Grade

GREK 1020 - Greek II: Biblical (5 Credits)
A continuation of 1st-semester Biblical and Classical Greek. Covers the remaining forms and syntax of the textbook, with an emphasis on sight-reading passages from the New Testament. At the end of the course we will read, translate and study short fragments and lines written by some Pre-Socratic philosophers such as Thales, Anaxagoras, Anaximander, Heraclitus, and Parmenides. Prereq: GREK 1010. Max hours: 5 Credits.
Grading Basis: Letter Grade
Prereq: GREK 1010.

GREK 2110 - Greek III: Classical (3 Credits)
Introduction to classical Greek, followed by reading of Plato's "Apology" with selections from "Pre-Socratic philosophers" (e.g. Xenophanes of Colophon, Zeno of Elea, Pythagoras) and Aristotle. Prereq: GREK 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GREK 1020.

GREK 2840 - Independent Study - GREK (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Max hours: 3 Credits.
Grading Basis: Letter Grade

GREK 4840 - Independent Study - GREK (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

GREK 5840 - Independent Study - GREK (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS Graduate Academic Services Coordinator for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Latin (LATN)

LATN 1010 - Elementary Latin I (5 Credits)
Introduces grammar, syntax, and vocabulary of Classical Latin, with an emphasis on preparing students to read Latin while improving English grammar and vocabulary skills. Two semesters of Latin may be used to fulfill the CLAS language competency requirement. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

LATN 1020 - Beginning Latin II (5 Credits)
Completes the presentation of basic Latin grammar, syntax and vocabulary. Introduces students to Latin literature through readings in select authors adapted to meet the needs of beginning students. Note: This course assumes that students have passed LATN 1010 or equivalent, or have taken one year of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 1010 is recommended for success in this course. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

LATN 1050 - Vocabulary for Professionals (3 Credits)
Studies English words derived from Latin and Greek by analyzing their component parts (prefixes, stems, and suffixes). Cross-listed with ENGL 1050. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2010 - Intermediate Latin I (3 Credits)
Introduces advanced Latin grammar, vocabulary, syntax, and stylistics of Latin prose via readings in Caesar, Cicero and Livy. Includes review of basic Latin grammar, plus introduction to Latin prose composition and Latin rhetoric. Emphasis on historical, cultural, social context of authors and works. Note: This course assumes that students have passed LATN 1020 or equivalent, or have taken two years of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 1020 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2020 - Intermediate Latin II (3 Credits)
(Continuation of LATN 2010.) Completes the presentation of advanced Latin grammar, vocabulary, syntax, and stylistics of Latin prose. Continues the study of Latin prose composition and Latin rhetoric with emphasis on historical, cultural, and social context of authors and works. Note: This course assumes that students have passed LATN 2010 or equivalent, or have taken three years of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 2010 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

LATN 3000 - Medical Terminology (3 Credits)
The course enables students to understand medical terms by learning the Greek and Latin word elements that form these terms. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

LATN 3840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

LATN 4840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Linguistics (LING)

LING 2000 - Foundations of Linguistics (3 Credits)
Provides students with the foundations of the scientific study of language. Examines core areas within theoretical linguisitics, sociolinguistics, historical linguistics, language acquisition, and writing systems, using a variety of languages. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring.

LING 3100 - Language in Society (3 Credits)
Introduces students to language use in the context of American society. Examines the interaction between language and age, gender, race, ethnicity, education, income, social class, language attitudes, policy and politics. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

Spanish (SPAN)

SPAN 1000 - Introduction to Cultures of the Spanish Speaking World (3 Credits)
Introduces students to the Spanish-speaking cultures of Spain, Latin America, and the United States through a historical overview and a focus on contemporary politics and culture. Note: Taught in English. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

SPAN 1010 - Beginning Spanish I (5 Credits)
Introduces basic Spanish pronunciation and grammar, useful vocabulary and idioms. Readings and class discussions relating to the Hispanic world. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Term offered: fall, spring, summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Additional Information: Credit; Lower Division.
Typically Offered: Fall, Spring, Summer.

SPAN 1011 - Intensive Spanish (5 Credits)
SPAN 1011/1021 combines both semesters of the first year, and meets the needs of highly motivated students of the language and culture. Note: Students who have studied Spanish previously should not enroll in SPAN 1011/1021 without first consulting a department advisor. Cross-listed with SPAN 1021. Term offere: summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

SPAN 1020 - Beginning Spanish II (5 Credits)
(Continuation of SPAN 1010.) Further development of listening, speaking, reading and writing skills. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 1010 or equivalent, or have taken one year of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall, spring, summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 1021 - Intensive Spanish (5 Credits)
SPAN 1011/1021 combines both semesters of the first year, and meets the needs of highly motivated students of the language and culture. Note: Students who have studied Spanish previously should not enroll in SPAN 1011/1021 without first consulting a department advisor. Cross-listed with SPAN 1011. Term offered: summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

SPAN 1070 - Spanish Medical Conversation for Beginners (3 Credits)
SPAN 1070 is a beginner's Spanish class designed to help a variety of medical personnel and students, who don't have a previous knowledge of the Spanish language, to improve their communication with their Spanish speaking patients or clients. It involves learning and practicing basic and essential conversation such as greetings, asking information during medical visits or emergency care, giving recommendations, speaking about medical records and other health related issues. The class requires weekly practice of fundamental medical interviews in Spanish, while improving general fluency and cultural competence
Grading Basis: Letter Grade

SPAN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

SPAN 1995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

SPAN 2070 - Spanish Medical Conversation for Beginners II (3 Credits)
This course seeks to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview, while improving linguistic and cultural competence. The objectives of this course are to enhance competency in speaking, reading, listening and writing; and to develop a broad knowledge of Hispanic culture, all within the field of Healthcare Studies. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 2110 - Second Year Spanish I (3 Credits)
Continues the development of skills acquired in 1010 and 1020. Readings deal with Hispanic culture and current topics from Spain and Latin America. Development of informal oral and written expression. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 1020 or equivalent, or have taken two years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 2120 - Second Year Spanish II (3 Credits)
Continues the development of skills acquired in SPAN 1010, 1020 and 2110, together with a review of grammar. Readings deal with Hispanic culture and literature. Development of informal oral and written expression. SPAN 2120 satisfies the fourth-semester language requirement at most graduate schools. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 2110 or equivalent, or have taken three years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 2130 - Current Topics in the Spanish-Speaking World (3 Credits)
A fourth-semester course (parallel to 2120) designed for students majoring or minoring in international affairs, but open to anyone wishing to continue the study of Spanish beyond 2110. Along with development of language skills and grammar review, class work involves contemporary topics in cultural, political, economic and social affairs. Note: This course assumes that students have passed SPAN 2110 or equivalent, or have taken three years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2110 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SPAN 2995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

SPAN 3010 - Spanish Composition I (3 Credits)
Expansion and reinforcement of oral and written skills in Spanish at an advanced level, in a broad cultural context. Oral activities are individual and in groups. Topics are introduced through oral activities, and are then used for written assignments. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 3020 - Spanish Composition II (3 Credits)
(Continuation of SPAN 3010.) Development of oral and written skills in Spanish in preparation for taking other advanced courses. Topics of increasing complexity are selected from current publications in Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3025 - Writing for Latinos (3 Credits)
Writing class for students who grew up speaking Spanish, especially those who grew up in the United States. Focuses on different types of formal writing, spelling, difficult grammar points and writing as a process. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3026 - Writing for Latinos II (3 Credits)
This course is a continuation of SPAN 3025 (Writing for Latinos) designed for heritage speakers of Spanish, that is, for students who grew up in the United States and have learned Spanish at home. The goal for this course is to continue the development of the student's bilingual range to achieve communicative, linguistic and sociolinguistic competence in speaking, listening, reading and writing Spanish. Special emphasis will be given to grammar, appropriate vocabulary for formal registers, and academic writing of increased complexity. Students' work involves reading, composing, writing and proof reading different type of essays on topics related to students' cultural background, the Spanish speaking world, and Spanish for academic proposes. A multi-faceted approach to the language will help the student continue to gain a solid grasp of the Spanish language and all of its varieties and awareness of the diversity of the Hispanic communities both here in the US as well as in the Spanish speaking world. Recommended preparation: Completion of SPAN 2120 with a C or higher or consultation with an advisor in the CU Denver Department of Modern Languages or the instructor of record, for placement. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3030 - Spanish Oral Proficiency (3 Credits)
This course is designed to help students acquire an "Intermediate High" level of proficiency in speaking and understanding spoken Spanish. Content-based instruction in small groups. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. This course is not intended for heritage Spanish speakers. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to SPAN-BA or SPAN-MIN students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

SPAN 3050 - Advanced Spanish Grammar (3 Credits)
A close study of the structure of the language and practice in its written use. Note: Recommended for those intending to teach Spanish at the secondary level. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3060 - Hispanic Phonetics: Theory and Practice (3 Credits)
Explores the phonetics of spoken Spanish throughout the world. Theoretical content: classification of all Spanish sounds and how they are affected and change according to their phonetic environment and region. Practical features: pronunciation and strategies teaching English speakers to pronounce Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3101 - Introduction to the Study of Literature (3 Credits)
The basic terms and skills needed to analyze both the themes and form of literary works, together with an introduction to research skills. All literary examples come from Hispanic literature. Note: SPAN 3252 is a prerequisite (previous or concurrent) to all other literature courses taught in Spanish. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. This course is a prerequisite/corequisite for all other literature courses taught in Spanish. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3199 - Topics in Spanish Literature (3 Credits)
Varying topics in Hispanic literature appropriate the 3000 level, not otherwise covered by regular courses. Note: Taught in Spanish for major and minor credit. May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3101

SPAN 3212 - Spanish American Culture and Civilization (3 Credits)
Surveys the social, political, economic, religious, literary, and artistic life of Spanish America from the conquest to the present. Note: Taught in Spanish for major and minor credit. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3213 - Contemporary Latin American Culture and Institutions (3 Credits)
Introduction to contemporary Latin American culture and institutions, with emphasis on the social, economic and political institutions of Spanish-speaking countries. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3221 - Culture and Civilization of Spain I (3 Credits)
From prehistoric times through Phoenician, Greek, Roman, and Visigothic eras to the Moorish invasion in 711; the Arab period; the Reconquest; the Catholic Kings; the Imperial Period; and the Inquisition. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3222 - Culture and Civilization of Spain II (3 Credits)
(Continuation of 3221.) Studies the social, intellectual, and artistic development of Spain from the time of the Bourbons (18th century) through the civil war of 1936, and the Franco regime to the restoration of democracy under Juan Carlos I and the present day. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3223 - Contemporary Spanish Culture and Institutions (3 Credits)
A study of contemporary Iberian culture, including an emphasis on modern business institutions and practices. This course can be applied to any Spanish major track but is specifically required for the International Language and Culture for the Professions track. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3225 - Special Topics In Hispanic Culture (3 Credits)
Variable topics in advanced studies in Spanish and Latin American culture. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

SPAN 3230 - Ibero-American Cultures through Film (3 Credits)
A study of the Ibero-American cultures through their most representative films. Films will be windows to access the complexities and the contradictions lived in Ibero-American countries regarding a set of contemporary issues, such as violence, linguistic diversity, religious beliefs, sexuality, politics, history, social class, and globalization. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3240 - Food Metaphors: Ibero-American Cuisine and Culture (3 Credits)
Intermediate/advanced Spanish students study interactions between Ibero-American cuisine and cultures. While improving Spanish skills, students learn how to cook Hispanic meals, study scholarly materials on food and cultures, watch films featuring meals as protagonists and read literary works of fiction and poetry. Taught in Spanish. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3270 - Bilingual Communities: Spanish as a Language of Contact (3 Credits)
Explores bilingualism by tracing the series of linguistic and ethnic contacts that converted Castilian from a Latin dialect to the language of the Spanish empire, the primary language of Latin America, and a fast-growing language in the United States. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3400 - Survey of Spanish Literature I (3 Credits)
The most important works in the literature of Spain from the early Hispano-Arabic lyric poems through the golden age of the 17th century. Prereq or coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3410 - Survey of Spanish Literature II (3 Credits)
The most important works in the literature of Spain from the 18th century to the present. Prereq or coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3510 - Survey of Spanish American Literature II (3 Credits)
The most important works in the literature of Spanish America from the late 19th century to the present. Prereq or Coreq: SPAN 3101 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101 with a C- or higher.

SPAN 3550 - Spanish American Short Story (3 Credits)
The Spanish American short story from its beginnings in the romantic period of the 19th century to the present. Prereq or Coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3700 - Spanish for International Business I (3 Credits)
Development of proficiency in oral and written Spanish as used in business and industry throughout the Hispanic world, together with an increased awareness of social, economic, and political conditions affecting business transactions, particularly in long-term operations. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3710 - Spanish for International Business II (3 Credits)
(Continuation of SPAN 3700.) Further development of oral and written language proficiency, together with further examination of pertinent social, economic, and political conditions of the Hispanic world. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. SPAN 3700 desirable. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3730 - Special Topics in Spanish for the Professions (3 Credits)
Variable topics in Spanish for the Professions not otherwise covered in regular course offerings. Note: May be taken more than once, provided that the topic is different each time. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring, fall. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring.

SPAN 3740 - Spanish for the Healthcare Professions I (3 Credits)
This course seeks to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview while improving linguisitc and intercultural competence. Note: SPAN 2120 or proficiency in Spanish equivalent to a fourth semester of college-level coursework is strongly recommended for optimal student success. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3750 - Spanish for the Healthcare Professions II (3 Credits)
SPAN 3750 is a continuation of SPAN 3740. Students will continue to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview while improving linguistic and intercultural competence. Note: SPAN 2120 or proficiency in Spanish equivalent to a fourth semester of collegelevel coursework is strongly recommended for optimal student success. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3782 - Introduction to Translation I (3 Credits)
The first course in a two-semester sequence that introduces the methodology and practice of written translation. Thorough analysis of source texts precedes translation into target language. Students must demonstrate third-year competence in Spanish and advanced writing skills in English. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3792 - Introduction to Translation II (3 Credits)
Second course in a two-semester sequence (see SPAN 3782). Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3840 - Independent Study: SPAN (1-3 Credits)
Repeatable. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

SPAN 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SPAN 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

SPAN 4010 - History of the Spanish Language (3 Credits)
Studies the history of the Spanish language, both internal and external, from the language's Latin roots to the present. Historical phonetics are emphasized, though all features of the language are discussed. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5010. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4020 - Spanish Sociolinguistics (3 Credits)
Studies the Spanish language in its social context. In addition to specific regional linguistic features, social factors such as geography, social class, politics, race, gender, economics, education and history are discussed as determiners of the linguistic landscape. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5020. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4030 - The Learning and Teaching of Heritage Speakers (3 Credits)
Studies Spanish heritage speakers, including characteristics of how they learn and how best to teach them. Includes definitions of heritage speakers, strengths and weaknesses in learning Spanish, and attitudes of and towards heritage speakers in the classroom. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5030. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Fall, Spring.

SPAN 4040 - Spanish Classroom Methods and Practice (3 Credits)
Focuses on the second language learning and teaching of Spanish in a classroom context. Looks at topics including second language vocabulary, pronunciation, grammar, and types of feed back. Practical component of activity design and learning/teaching strategies. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5040. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Spring.

SPAN 4060 - Dialects of the Spanish-Speaking World (3 Credits)
Studies the geography of the Spanish language in those countries where it is spoken as a primary language. Includes a comparison of dialect features and a study of factors that contribute to the diversity of the Spanish language. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5060. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4070 - Spanish Applied Linguistics & Second Language Acquisition (3 Credits)
This course is a survey of various areas of the field of linguistics in general (e.g. morphology, syntax, semantics, pragmatics, etc.) as well as specific aspects of the structure (and acquisition) of the Spanish language. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5070. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Fall, Spring.

SPAN 4076 - Spanish in Colorado (3 Credits)
A study of the Spanish language in its social context in Colorado and New Mexico. We will study historical factors as well as current social factors that contribute to the use of the Spanish language in this region. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5076. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Summer.

SPAN 4080 - Spanish in the United States (3 Credits)
A study of the Spanish language in its social context as a language of the United States. In addition to studying bilingualism and language traits, factors such as race, gender, class, education, nationality, age, generation and language attitudes are considered. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5080. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4099 - Special Topics in Linguistics (3 Credits)
Varying topics in Hispanic language and literature not otherwise covered by regular courses. Note: May be taken more than once provided that the topics are different each time. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5099. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4110 - Contemporary Spanish Literature (3 Credits)
Major works published since the Spanish Civil War, which ended in 1939. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5110. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4130 - Medieval Spanish Literature (3 Credits)
Examines Spanish literature from the jarchas and the Cid through the Celestina in the context of the reconquest. Considers the construction of the Christian knight as a hero and the corresponding representations of women, Jews and Muslims. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5130. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4150 - Masterpieces of Spanish Literature (3 Credits)
The most enduring works in the literature of Spain across the centuries. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5150. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4170 - Golden Age Drama (3 Credits)
Spanish drama of the 16th and 17th centuries, the period of greatest dramatic productivity in the nation's history. Readings include selections from Lope de Vega, Tirso de Molina, Calderon de La Barca, and others. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5170. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4180 - Modernism (3 Credits)
Examines the first real flowering of Spanish American literature, from about 1880 to 1910. The dominant genres of the period were the short story, the essay and lyric poetry. Readings come from Dario, Jose Enrique Rodo, Manuel Gutierrez Najera, Manuel Diaz Rodriquez and others. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5180. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4190 - Nineteenth-Century Spanish Novel (3 Credits)
The Spanish novel in one of its most productive periods, beginning with romanticism and carrying through the realist and naturalist movements. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5190. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4300 - Generation of 1898 (3 Credits)
Spanish literature from around the turn of the century through the first third of the 20th century, reflecting the deep intellectual and cultural foment occasioned in part by Spain's loss of the Spanish-American War of 1898. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4320 - Interculturalism and Transnationalism in Modern Spain (3 Credits)
Students will examine experiences of Spaniards living in different parts of the world and the circumstances of either foreigners or migrants living in Spain, through their visual and literary texts, film, photographs, documentaries and other products of current popular culture, such as contemporary television. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5320. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4330 - Modern Culture of Spain through Film and Narrative (3 Credits)
Culture of modern Spain studied through Spanish film. The death of military dictator Francisco Franco opened the process for the recuperation of a usurped democratic, representational system that has become the basis of a cultural and economic resurgence. Taught in Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5330. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4340 - Race, Class, and Gender in Spanish Golden Age Literature (3 Credits)
Explores works of various genres in relation to their social and political contexts in 16th and 17th century Spain, emphasizing the cultural attitudes toward race, class, and gender that inform them. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5340 and WGST 4540/5540. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4350 - Don Quijote (3 Credits)
The complete Don Quijote in Spanish, focusing on its historical, social, and philosophic context, and its role in the emergence of the modern novel. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5350. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4360 - Women and the Spanish Civil War (3 Credits)
Focuses on the role of Spanish women during the Second Republic, the Civil War, the dark & starving postwar, & the inescapable exile that was a consequence of the conflict. Discusses several texts & films that portray this silenced odyssey, as well as historical, ideological & cultural documents of critical value & significance. Cross-listed with SPAN 5360. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 4380 - Romanticism in Spain (3 Credits)
The romantic movement in 19th century Spain through plays, poems, essays. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4399 - Special Topics: Spanish Peninsular Literature (3 Credits)
Varying topics in Spanish Peninsular Literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3101. Term offered: spring, fall. Repeatable. Max Hours: 6 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4401 - Survey of Spanish-American Literature I: Pre-1898 (3 Credits)
The most important works in the literature of Spanish America from the Colonial Period to the Late 19th Century. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5401. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4411 - Contemporary Spanish-American Novel (3 Credits)
The novel in Spanish America since the Second World War, the period in which the greatest number and quality of works has been produced. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5411. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4450 - Masterpieces of Spanish-American Literature (3 Credits)
Focuses on a limited number of outstanding works in Spanish-American literature across the centuries. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5450. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4501 - Borges: An Introduction to His Labyrinths (3 Credits)
The works of Jorge Luis Borges (short stories, essays, poetry, translations, essays anthologies, lectures) will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5501. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4512 - Contemporary Argentine Short Stories (3 Credits)
The short stories by extraordinary Argentine writers, such as Jorges Luis Borges, Silvina Ocampo, Julio Cortazar, Griselda Gambaro, Adolfo Bioy Casares, and Manuel Muica Laineza, among others, will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5512. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4521 - Mexican Literature I: pre-Columbian and Colonial (3 Credits)
Survey of Mexican literature and culture from pre-Columbian times to the colonial era. Prereq or Coreq: SPAN 3101. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with SPAN 5521. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4522 - Mexican Literature II: 19th to 21st Centuries (3 Credits)
Survey of Mexican literature and culture from the early modern to contemporary literature. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5522. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4525 - Orientalisms In The Hispanic Tradition (3 Credits)
Advanced studies of orientalism in the Hispanic tradition: the Hispano-Arabic cultural heritage in Early Medieval Spain and in contemporary Hispanic cultures, as well as the influence of other eastern religions and cultures, such as Judaism or Buddhism. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5525. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4541 - Unexpected Lives: Ibero-American Queer Cinema (3 Credits)
Provocative films, by courageous Ibero-American filmmakers, on controversial topics (homosexuality, Lesbianism, bisexualism, transgender individuals, feminism, etc.) will be studied to teach students to think globally as well as critically about LGTBQ individuals in the context of Ibero-American cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5541. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4550 - Garcia Marquez: Words of Magic (3 Credits)
The works of Gabriel Garcia Marquez (stories, short novels, novels, newspaper articles, interviews, lectures) will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5550. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4590 - Ibero-American Thought (3 Credits)
The course examines philosophical works by essayists, literary critics, and cultural thinkers from Spanish-American countries and the Iberian Peninsula. Besides reading philosophical works in their original form, students will read scholarly commentaries to deepen their understanding of those works. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5590. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4599 - Special Topics: Latin American Literature (3 Credits)
Varying topics in Latin American literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Term offered: spring, fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4600 - Seminar in Spanish Creative Writing: Poetry and Short Fiction (3 Credits)
A capstone writing course. Semester writing project will be collected poems and short stories. Prereq: junior standing or higher. Cross-listed with SPAN 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

SPAN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. Note: This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 5690, FREN 4690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 5691, FREN 4691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

SPAN 4840 - Independent Study: SPAN (1-3 Credits)
Repeatable. Department consent required. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

SPAN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

SPAN 4970 - Special Topics in Literature (3 Credits)
Varying topics in Hispanic literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5970. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

Spanish, 4 + 1 BA/ MA

Introduction

Please click here (p. 687) to see Modern Languages department information.

The combined BA/MA (4+1) program in Spanish provides a coherent cumulative educational experience that prepares students for either immediate entry into a Master's level career or continued study in a PhD program. The BA/MA application process is competitive, as the program is designed for highly qualified students who have the scholarly and linguistic competencies necessary for an expedited program.

Students study the language, linguistics, literature, culture and civilization of Spain, Spanish America and the Spanish-speaking areas of the United States in their undergraduate coursework. Students choose from two options for completion of their Master's degree: either they complete their coursework and take a comprehensive written and oral exam in their last semester, or they complete a six credit thesis under the direction of Spanish faculty. The program offers a comparatively high degree of flexibility for students to focus their studies in one or more of the following fields of Hispanic studies: Spanish linguistics, methods of teaching Spanish as a foreign language, Spanish and Spanish American literature and cultural studies, including film.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Spanish faculty advisors and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students should officially declare their intent to complete this program in their junior year and apply to the graduate program during their senior year. Applicants should have completed all CLAS and Core requirements by the end of their 3rd year.
  • Student must demonstrate promise or ability to pursue advanced study and research, as shown by previous scholastic records.
  • Demonstrate Spanish oral and written proficiency at the Advanced level, as defined by the American Council on the Teaching of Foreign Languages.
  • If a native speaker must be proficient with the English language and able to speak, read and write at a graduate school level.
- To be admitted to the combined BA/MA in Spanish program, students must earn an overall GPA of B (3.0) or higher in their undergraduate coursework, but also an average GPA of B+ (3.5) or higher in their upper-division Spanish coursework (3000-4000 level). For any graduate course to be counted toward the master's degree, the student must earn a minimum grade of B- (2.7). All graduate coursework must be completed with an overall grade point average of B (3.0) or higher. Students cannot complete major, graduate, or ancillary course requirements as pass/fail.
  - Students must complete a 4+1 intent form (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/modern-languages/spanish-4--1-ba-ma/BMA_form_1_1_.pdf) to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Students must apply and be accepted to the Spanish, MA during the last semester of their undergraduate career. A maximum of 12 credit hours of graduate level courses that are applied to the undergraduate degree will apply to the graduate degree.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements Graduation Requirements (p. 373)
- Click here (p. 109) for information about Academic Policies

Admissions Requirements and Process

- Interested students should contact their SPAN undergraduate and graduate advisors as early as possible to ensure proper planning for the five year degree.
- Student and faculty will work together to submit an intent to complete the program form to CLAS Advising.
- To qualify, students must have a 3.0 or higher GPA in CLAS. All courses taken at the 4000- and 5000-level must be completed with at least a B or higher.

- Students may apply to the graduate program during the semester in which they will successfully complete their degree, and should have most of their general education and major requirements completed by this time.

Program Requirements

1. Students must complete a minimum of 36 major credit hours with a minimum of 30 SPAN credit hours.
2. Students must complete a minimum of 30 upper division (3000-level and above) SPAN credit hours, with at least 12 SPAN credit hours at the 4000 level and nine credits of 5000-level Spanish elective courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. Students must earn a minimum grade of B- (2.7) in all courses that apply to the graduate degree and must achieve a minimum cumulative major GPA of 3.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major or graduate requirements.
4. Students must complete a minimum of 18 SPAN undergraduate level credit hours with CU Denver faculty. All graduate level credit hours must be completed with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must satisfy all existing requirements for both an undergraduate degree in CLAS with a Spanish Language, Literature and Culture major (p. 712) and a Master of Arts in Spanish (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/modern-languages/spanish-ma/) degree. These requirements can be fulfilled through multiple possible paths through the department's curriculum.
2. A maximum of 12 graduate credit hours may be used to fulfill both the undergraduate and graduate degree requirements.

Requirements

Code	Title	Hours
Complete the following required courses:		*9*
SPAN 3060	Hispanic Phonetics: Theory and Practice	
SPAN 3101	Introduction to the Study of Literature	
SPAN 5000	Introduction to Graduate Studies in Spanish	

Language Skills and Theory

Code	Title	Hours
Complete two of the following courses:		*6*
SPAN 3010	Spanish Composition I	
SPAN 3020	Spanish Composition II	
SPAN 3025	Writing for Latinos	
SPAN 3026	Writing for Latinos II	
SPAN 3030	Spanish Oral Proficiency	
SPAN 3050	Advanced Spanish Grammar	
SPAN 4010	History of the Spanish Language	
or SPAN 5010	History of the Spanish Language	
SPAN 4020	Spanish Sociolinguistics	
or SPAN 5020	Spanish Sociolinguistics	
SPAN 4030	The Learning and Teaching of Heritage Speakers	
or SPAN 5030	The Learning and Teaching of Heritage Speakers	
SPAN 4040	Spanish Classroom Methods and Practice	
or SPAN 5040	Spanish Classroom Methods and Practice	
SPAN 4060	Dialects of the Spanish-Speaking World	
or SPAN 5060	Dialects of the Spanish-Speaking World	
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition	
or SPAN 5070	Spanish Applied Linguistics & Second Language Acquisition	
SPAN 4076	Spanish in Colorado	
or SPAN 5076	Spanish in Colorado	

SPAN 4080	Spanish in the United States
or SPAN 5080	Spanish in the United States
SPAN 4099	Special Topics in Linguistics
or SPAN 5099	Special Topics in Linguistics

Culture and Civilizations of Spain or Spanish America

Code	Title	Hours
Complete two of the following courses:		*6*
SPAN 3212	Spanish American Culture and Civilization	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3221	Culture and Civilization of Spain I	
SPAN 3222	Culture and Civilization of Spain II	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture	
SPAN 3230	Ibero-American Cultures through Film	
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	

Peninsular Spanish Literature, Culture and Film

Code	Title	Hours
Complete one of the following courses:		*3*
SPAN 3199	Topics in Spanish Literature	
SPAN 4110	Contemporary Spanish Literature	
or SPAN 5110	Contemporary Spanish Literature	
SPAN 4130	Medieval Spanish Literature	
or SPAN 5130	Medieval Spanish Literature	
SPAN 4150	Masterpieces of Spanish Literature	
or SPAN 5150	Masterpieces of Spanish Literature	
SPAN 4170	Golden Age Drama	
or SPAN 4170	Golden Age Drama	
SPAN 4180	Modernism	
or SPAN 5180	Modernism	
SPAN 4190	Nineteenth-Century Spanish Novel	
or SPAN 5190	Nineteenth-Century Spanish Novel	
SPAN 4300	Generation of 1898	
or SPAN 5300	Generation of 1898	
SPAN 4320	Interculturalism and Transnationalism in Modern Spain	
or SPAN 5320	Interculturalism and Transnationalism in Modern Spain	
SPAN 4330	Modern Culture of Spain through Film and Narrative	
or SPAN 5330	Modern Culture of Spain through Film and Narrative	
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	
or SPAN 5340	Race, Class, and Gender in Spanish Golden Age Literature	
SPAN 4350	Don Quijote	
or SPAN 5350	Don Quijote	
SPAN 4360	Women and the Spanish Civil War	
or SPAN 5360	Women and the Spanish Civil War	
SPAN 4380	Romanticism in Spain	
or SPAN 5380	Romanticism in Spain	
SPAN 4399	Special Topics: Spanish Peninsular Literature	
or SPAN 5399	Special Topics: Spanish Peninsular Literature	

Latin American Literature, Culture and Film

Code	Title	Hours
Complete one of the following courses:		*3*
SPAN 4401	Survey of Spanish-American Literature I: Pre-1898	
or SPAN 5401	Survey of Spanish-American Literature I: Pre-1898	
SPAN 4411	Contemporary Spanish-American Novel	
or SPAN 5411	Contemporary Spanish-American Novel	
SPAN 4450	Masterpieces of Spanish-American Literature	
or SPAN 5450	Masterpieces of Spanish-American Literature	
SPAN 4501	Borges: An Introduction to His Labyrinths	
or SPAN 5501	Borges: An Introduction to His Labyrinths	
SPAN 4512	Contemporary Argentine Short Stories	
or SPAN 5512	Contemporary Argentine Short Stories	
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial	
or SPAN 5521	Mexican Literature I: pre-Columbian and Colonial	
SPAN 4522	Mexican Literature II: 19th to 21st Centuries	
or SPAN 5522	Mexican Literature II: 19th to 21st Centuries	
SPAN 4525	Orientalisms In The Hispanic Tradition	
or SPAN 5525	Orientalisms In The Hispanic Traditions	
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema	
or SPAN 5541	Unexpected Lives: Ibero-American Queer Cinema	
SPAN 4550	Garcia Marquez: Words of Magic	
or SPAN 5550	Garcia Marquez: Words of Magic	
SPAN 4590	Ibero-American Thought	
or SPAN 5590	Ibero-American Thought	
SPAN 4599	Special Topics: Latin American Literature	
or SPAN 5599	Special Topics: Latin American Literature	

Graduate Level Linguistics

Code	Title	Hours
Complete one of the following courses, in consultation with the graduate program director:		*3*
SPAN 5010	History of the Spanish Language	
SPAN 5020	Spanish Sociolinguistics	
SPAN 5040	Spanish Classroom Methods and Practice	
SPAN 5060	Dialects of the Spanish-Speaking World	
SPAN 5070	Spanish Applied Linguistics & Second Language Acquisition	
SPAN 5076	Spanish in Colorado	
SPAN 5080	Spanish in the United States	
SPAN 5690	Methods of Teaching Modern Languages	
or MLNG 5690	Methods of Teaching Modern Languages	

Graduate Level Literature

Code	Title	Hours
Complete one of the following courses, in consultation with the graduate program director:		*3*
SPAN 5030	The Learning and Teaching of Heritage Speakers	
SPAN 5110	Contemporary Spanish Literature	
SPAN 5130	Medieval Spanish Literature	
SPAN 5150	Masterpieces of Spanish Literature	
SPAN 5170	Golden Age Drama	
SPAN 5180	Modernism	
SPAN 5330	Modern Culture of Spain through Film and Narrative	

SPAN 5340	Race, Class, and Gender in Spanish Golden Age Literature
SPAN 5350	Don Quijote
SPAN 5360	Women and the Spanish Civil War
SPAN 5399	Special Topics: Spanish Peninsular Literature
SPAN 5411	Contemporary Spanish-American Novel
SPAN 5450	Masterpieces of Spanish-American Literature
SPAN 5521	Mexican Literature I: pre-Columbian and Colonial
SPAN 5522	Mexican Literature II: 19th to 21st Centuries
SPAN 5525	Orientalisms In The Hispanic Traditions
SPAN 5590	Ibero-American Thought
SPAN 5970	Special Topics in Literature

To learn more about the Student Learning Outcomes for this program, please visit our website.

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Spanish Language, Literature and Culture, BA

Introduction

Please click here (p. 687) to see Modern Languages department information.

The Spanish program studies the language, linguistics, literature, culture and civilization of Spain, Spanish America and the Spanish-speaking areas of the United States.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- To be admitted to major status in Spanish, students must have an overall GPA of C+ (2.3).

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 credit hours with a minimum of 30 SPAN credit hours.
2. Students may have 3 credits (one course) of SPAN at the 2000 level apply to the major, and all other SPAN courses must be completed at the upper division (3000-level and higher). At least 12 SPAN credit hours must be completed at the 4000 level or higher.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 SPAN credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Spanish majors are advised to take MATH 1010 Mathematics for the Liberal Arts or MATH 2830 Introductory Statistics for their CU Denver Core Curriculum Mathematics requirement.
2. Courses taken at other institutions while a student is enrolled at CU Denver may be applied to the major only with departmental approval before enrollment in those courses.
3. Before enrolling in their final semester in the language, Spanish majors must be evaluated by the faculty in oral and written skills. Students must see their Spanish advisor for specific information.
4. Up to six credit hours of the 36 upper division level credit hours may be taken in related fields.

Code	Title	Hours
Complete the following required courses:		*6*
SPAN 3060	Hispanic Phonetics: Theory and Practice	
SPAN 3101	Introduction to the Study of Literature	
Complete a minimum of two Language Skills and Theory courses from the approved list.		*6*
Language Skills and Theory (p. 712)		
Complete a minimum of two Culture and Civilizations of Spain or Spanish America courses from the approved list.		*6*
Culture and Civilizations of Spain or Spanish America (p. 713)		
Complete a minimum of one Peninsular Spanish Literature, Culture and Film course from the approved list.		*3*
Peninsular Spanish Literature, Culture and Film (p. 713)		
Complete a minimum of one Latin American Literature, Culture and Film course from the approved list.		*3*
Latin American Literature, Culture and Film (p. 713)		
Complete 12 credit hours of upper division (3000-level and higher) Spanish electives. [1]		*12*
Up to two of these electives may be completed outside the SPAN subject code from the approved course list.		
Approved Electives outside of SPAN (p. 713)		
Total Hours		**36**

[1]
- A maximum of 3 credits (one course) of Spanish may be completed at the 2000 level.
- SPAN 4690 Methods of Teaching Modern Languages and SPAN 4691 Methods of Teaching Modern Languages II apply to the Spanish major as electives outside of Spanish.

Language Skills and Theory

Code	Title	Hours
Complete at least two of the following		*6*
SPAN 3010	Spanish Composition I	
SPAN 3020	Spanish Composition II	
SPAN 3025	Writing for Latinos	
SPAN 3026	Writing for Latinos II	
SPAN 3030	Spanish Oral Proficiency	

SPAN 3050	Advanced Spanish Grammar
SPAN 3060	Hispanic Phonetics: Theory and Practice
SPAN 4010	History of the Spanish Language
SPAN 4020	Spanish Sociolinguistics
SPAN 4030	The Learning and Teaching of Heritage Speakers
SPAN 4040	Spanish Classroom Methods and Practice
SPAN 4060	Dialects of the Spanish-Speaking World
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition
SPAN 4076	Spanish in Colorado
SPAN 4080	Spanish in the United States
SPAN 4099	Special Topics in Linguistics

Culture and Civilizations of Spain or Spanish America

Code	Title	Hours
Complete at least two of the following		*6*
SPAN 3212	Spanish American Culture and Civilization	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3221	Culture and Civilization of Spain I	
SPAN 3222	Culture and Civilization of Spain II	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture	
SPAN 3230	Ibero-American Cultures through Film	
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	

Peninsular Spanish Literature, Culture and Film

Code	Title	Hours
Complete at least one of the following		*3*
SPAN 3199	Topics in Spanish Literature	
SPAN 4110	Contemporary Spanish Literature	
SPAN 4130	Medieval Spanish Literature	
SPAN 4150	Masterpieces of Spanish Literature	
SPAN 4170	Golden Age Drama	
SPAN 4180	Modernism	
SPAN 4190	Nineteenth-Century Spanish Novel	
SPAN 4300	Generation of 1898	
SPAN 4320	Interculturalism and Transnationalism in Modern Spain	
SPAN 4330	Modern Culture of Spain through Film and Narrative	
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	
SPAN 4350	Don Quijote	
SPAN 4360	Women and the Spanish Civil War	
SPAN 4380	Romanticism in Spain	
SPAN 4399	Special Topics: Spanish Peninsular Literature	

Latin American Literature, Culture and Film

Code	Title	Hours
Complete at least one of the following		*3*
SPAN 3400	Survey of Spanish Literature I	
SPAN 3410	Survey of Spanish Literature II	
SPAN 3510	Survey of Spanish American Literature II	
SPAN 3550	Spanish American Short Story	
SPAN 4401	Survey of Spanish-American Literature I: Pre-1898	
SPAN 4411	Contemporary Spanish-American Novel	
SPAN 4450	Masterpieces of Spanish-American Literature	
SPAN 4501	Borges: An Introduction to His Labyrinths	
SPAN 4512	Contemporary Argentine Short Stories	
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial	
SPAN 4522	Mexican Literature II: 19th to 21st Centuries	
SPAN 4525	Orientalisms In The Hispanic Tradition	
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema	
SPAN 4550	Garcia Marquez: Words of Magic	
SPAN 4590	Ibero-American Thought	
SPAN 4599	Special Topics: Latin American Literature	

Electives Outside of Spanish

Code	Title	Hours
Up to two of these courses/ cross-lists, can be applied as electives:		
ANTH 3121	Language, Culture, and Communication	
ANTH 4320	Archaeology of Mexico and Central America	
CLDE 4800	Language Development and Acquisition	
CHIN 3010	Advanced Intermediate Chinese	
CHIN 3130	Special Topics in Chinese	
CHIN 3200	Contemporary Chinese Society and Culture	
CHIN 3300	Special Topics on Chinese Film	
CLDE 5030	Language Development of Multilingual Learners: Advanced [1]	
CLDE 5820	Teaching Multilingual Learners, Advanced	
ENGL 3160	Language Theory	
ENGL 3798	International Perspectives in Literature and Film	
ENGL 4601	Teaching English Language Learners: Theory and Practice	
ENGL 4460	Contemporary World Literature	
ETST 3108	Chicano/a and Latino/a History	
ETST/HIST 3350	Colonial Latin America	
ETST 4768	Chicano/Chicana Narrative and Social History	
FREN 3010	French Phonetics and Pronunciation	
FREN 3020	Conversation through Film	
FREN 3050	Advanced Grammar and Composition	
FREN 3060	Advanced French Language Skills	
FREN 3112	Survey of French Literature I	
FREN 3120	French Cultural Identities: Myths and Realities	
FREN 3122	Survey of French Literature II	
FREN 3130	Current Topics of the French-Speaking World	
FREN 3140	Contemporary Francophone Cultures	
FREN 3200	The Francophone World in the Post-Colonial Era	
FREN 3970	Special Topics	

FREN 4010	Advanced Composition: Stylistics
FREN 4050	Advanced French for Business
FREN 4082	Introduction to Translation
FREN 4200	French Civilization Through the Nineteenth Century
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries
FREN 4310	Seventeenth Century Literature
FREN 4360	Eighteenth Century Novel, Theater and Poetry
FREN 4430	Nineteenth Century French Novel
FREN 4480	Twentieth Century French Novel
FREN 4490	Twentieth Century French Theater
FREN 4510	French Women Writers
FREN 4520	Voices of Haiti and the Caribbean
FREN 4600	History of the French Language
GEOG 3130	Central America and the Caribbean
GEOG 3140	Geography of South America
GRMN 3200	Current German Society and Culture
HIST 3345	Immigration and Ethnicity in American History
HIST 3460	Modern Latin American History
HIST/ETST 4411	Modern Mexico
HIST 4412	Mexico and the United States: People and Politics on the Border
HIST 4415	Social Revolutions in Latin America
HIST 4417	Commodities and Globalization
LING 3100	Language in Society
MLNG/SPAN 4690	Methods of Teaching Modern Languages
MLNG/SPAN 4691	Methods of Teaching Modern Languages II
PSCI 4235	Politics and Markets in Latin America
PSCI 4545	Immigration Politics

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/spanish-program/spanish-major-language-literature-and-culture-track/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Spanish Language, Literature and Culture BA with Secondary Teaching Licensure Endorsement

Introduction

Please click here (p. 687) to see Modern Languages department information.

This course of study is for undergraduate students who are seeking their license to teach Spanish Foreign Language in middle and high school. The program is a joint effort between the College of Liberal Arts and Sciences and the School of Education & Human Development. Students earn a Bachelor of Arts degree through the College of Liberal Arts and Sciences in Spanish Language, Literature and Culture and a teaching license through the School of Education & Human Development.

- Student pursuing this path must major in the Spanish Language, Literature and Culture option (p. 712) and complete the teaching licensure pathway for World Languages. (p. 927)

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- To be admitted to major status in Spanish, students must have an overall GPA of C+ (2.3).
- Students planning to pursue this path must consult with an advisor as soon as possible.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- School of Education Secondary Teacher Education Licensure Program Requirements (p. 927)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 credit hours with a minimum of 30 SPAN credit hours.
2. Students may have 3 credits (one course) of SPAN at the 2000 level apply to the major, and all other SPAN courses must be completed at the upper division (3000-level and higher). At least 12 SPAN credit hours must be completed at the 4000 level or higher.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 SPAN credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Spanish majors are advised to take MATH 1010 Mathematics for the Liberal Arts or MATH 2830 Introductory Statistics for their CU Denver Core Curriculum Mathematics requirement.
2. Courses taken at other institutions while a student is enrolled at CU Denver may be applied to the major only with departmental approval before enrollment in those courses.
3. Before enrolling in their final semester in the language, Spanish majors must be evaluated by the faculty in oral and written skills. Students must see their Spanish advisor for specific information.
4. Up to six credit hours of the 36 upper division level credit hours may be taken in related fields.
5. **Students are responsible for meeting with the advisor in the SEHD to confirm teacher education and licensure requirements**. In addition to completing all minimum program requirements above, SEHD secondary education students must complete the following minimum SEHD licensure (p. 927) requirements:
   a. Complete the Education Declaration form and all subsequent processes and requirements, including a background check, prior to April 1st (for students intending to complete their clinical field experience in fall) or November 1st (for students intending to complete their clinical field experience in spring). Students must meet with the SEHD advisor for detailed information.
   b. Student pursuing secondary education licensure must complete the following requirements to be admitted to the Professional (final) Year:
      i. a minimum cumulative CU GPA of 3.0 or higher. Students with a lower GPA may be considered under certain conditions.
      ii. all CU Denver Core, CLAS, major, electives, and initial teacher education coursework requirements prior to the start of the Professional Year
      iii. the official application and interview process
      iv. Deadlines for Professional Year application are February 15th (for students intending to begin Professional Year in fall) or October 1st (for students intending to begin Professional Year in spring).
   c. Students must complete all initial teacher education and professional (final) year coursework with a minimum grade of B- or higher.

Code	Title	Hours
Complete the following required courses:		*6*
SPAN 3060	Hispanic Phonetics: Theory and Practice	

SPAN 3101	Introduction to the Study of Literature	
Complete a minimum of two Language Skills and Theory courses from the approved list.		*6*
Language Skills and Theory (p. 716)		
Complete a minimum of two Culture and Civilizations of Spain or Spanish America courses from the approved list.		*6*
Culture and Civilizations of Spain or Spanish America (p. 716)		
Complete a minimum of one Peninsular Spanish Literature, Culture and Film course from the approved list.		*3*
Peninsular Spanish Literature, Culture and Film (p. 716)		
Complete a minimum of one Latin American Literature, Culture and Film course from the approved list.		*3*
Latin American Literature, Culture and Film (p. 716)		
Complete 12 credits of upper division (3000-level and higher) Spanish electives.		*12*
A maximum of 3 credits (one course) of SPAN may be completed at the 2000 level.		
Up to two electives may be completed outside the SPAN subject code from the approved course list.		
Approved Electives outside of SPAN (p. 717)		
In addition to the Spanish Language, Literature and Culture major requirements, must complete licensure requirements as outlined by the School of Education and Human Development.		
SEHD Licensure Requirements (p. 717)		
Total Hours		**36**

Language Skills and Theory

Code	Title	Hours
Complete at least two of the following		*6*
SPAN 3010	Spanish Composition I	
SPAN 3020	Spanish Composition II	
SPAN 3025	Writing for Latinos	
SPAN 3026	Writing for Latinos II	
SPAN 3030	Spanish Oral Proficiency	
SPAN 3050	Advanced Spanish Grammar	
SPAN 4010	History of the Spanish Language	
SPAN 4020	Spanish Sociolinguistics	
SPAN 4030	The Learning and Teaching of Heritage Speakers	
SPAN 4040	Spanish Classroom Methods and Practice	
SPAN 4060	Dialects of the Spanish-Speaking World	
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition	
SPAN 4076	Spanish in Colorado	
SPAN 4080	Spanish in the United States	
SPAN 4099	Special Topics in Linguistics	

Culture and Civilizations of Spain or Spanish America

Code	Title	Hours
Complete at least two of the following		*6*
SPAN 3212	Spanish American Culture and Civilization	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3221	Culture and Civilization of Spain I	
SPAN 3222	Culture and Civilization of Spain II	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture	
SPAN 3230	Ibero-American Cultures through Film	
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	

Peninsular Spanish Literature, Culture and Film

Code	Title	Hours
Complete at least one of the following		*3*
SPAN 3199	Topics in Spanish Literature	
SPAN 4110	Contemporary Spanish Literature	
SPAN 4130	Medieval Spanish Literature	
SPAN 4150	Masterpieces of Spanish Literature	
SPAN 4170	Golden Age Drama	
SPAN 4180	Modernism	
SPAN 4190	Nineteenth-Century Spanish Novel	
SPAN 4300	Generation of 1898	
SPAN 4320	Interculturalism and Transnationalism in Modern Spain	
SPAN 4330	Modern Culture of Spain through Film and Narrative	
SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	
SPAN 4350	Don Quijote	
SPAN 4360	Women and the Spanish Civil War	
SPAN 4380	Romanticism in Spain	
SPAN 4399	Special Topics: Spanish Peninsular Literature	

Latin American Literature, Culture and Film

Code	Title	Hours
Complete at least one of the following		*3*
SPAN 3400	Survey of Spanish Literature I	
SPAN 3410	Survey of Spanish Literature II	
SPAN 3510	Survey of Spanish American Literature II	
SPAN 3550	Spanish American Short Story	
SPAN 4401	Survey of Spanish-American Literature I: Pre-1898	
SPAN 4411	Contemporary Spanish-American Novel	
SPAN 4450	Masterpieces of Spanish-American Literature	
SPAN 4501	Borges: An Introduction to His Labyrinths	
SPAN 4512	Contemporary Argentine Short Stories	
SPAN 4521	Mexican Literature I: pre-Columbian and Colonial	
SPAN 4522	Mexican Literature II: 19th to 21st Centuries	
SPAN 4525	Orientalisms In The Hispanic Tradition	
SPAN 4541	Unexpected Lives: Ibero-American Queer Cinema	
SPAN 4550	Garcia Marquez: Words of Magic	
SPAN 4590	Ibero-American Thought	
SPAN 4599	Special Topics: Latin American Literature	

Electives Outside of Spanish

Code	Title	Hours
Up to six elective credits may be completed from the following list of courses outside of Spanish.		
CLDE 4800	Language Development and Acquisition [1]	
CLDE 5030	Language Development of Multilingual Learners: Advanced [1]	
CLDE 5820	Teaching Multilingual Learners, Advanced [1]	
MLNG/SPAN 4690	Methods of Teaching Modern Languages [1]	
MLNG 4691	Methods of Teaching Modern Languages II	

[1] The School of Education may develop undergraduate level cross-lists for CLDE 5030 Language Development of Multilingual Learners: Advanced and CLDE 5820 Teaching Multilingual Learners, Advanced.

CLDE 4020 Responsive Classroom Communities, CLDE 5030 Language Development of Multilingual Learners: Advanced and MLNG 4690 Methods of Teaching Modern Languages apply toward the Spanish elective requirements and the Secondary Teaching Licensure requirements. Double counting these three courses can save time and money as students complete the program.

Teaching Licensure Requirements

Students must complete the Secondary Education Licensure Requirements established by the School of Education and Human Development. (p. 927)

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/spanish-program/spanish-major-language-literature-and-culture-track/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Spanish, International Language and Culture for the Professions Option, BA

Introduction

Please click here (p. 687) to see Modern Languages department information.

This option in the Spanish major offers career possibilities, both in government and private industry, at home and abroad. Languages are useful in business, industry, commerce, civil service, law, library science, media, science, economics, health and social sciences. Students who follow this course of study could also qualify as teachers of general business subjects in bilingual as well as traditional school systems. (However, students who wish to be certified to teach Spanish in the public schools should consult the department for information concerning the undergraduate language licensure program.)

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- International Spanish for the Professions is a controlled-enrollment major that takes two years to complete. Interested students should contact the Spanish advisor in the Department of Modern Languages to declare the major. This should be done as early as possible in the student's academic career, but not later than the second semester of the sophomore year.
- To be admitted to major status in Spanish, students must have an overall GPA of C+ (2.3).
- Prerequisites: *(These courses do not count toward the major total of 45 semester hours)*

Code	Title	Hours
ECON 2012	Principles of Economics: Macroeconomics	3
ECON 2022	Principles of Economics: Microeconomics	3
MATH 1070	College Algebra for Business	3
or MATH 1110	College Algebra	
SPAN 2110	Second Year Spanish I	3
or SPAN 2120	Second Year Spanish II	

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 45 credit hours, including a minimum of 30 SPAN credit hours and 15 credit hours in ancillary coursework.
2. Students must complete a minimum of 30 upper division (3000-level and above) credit hours and minimum of six SPAN credit hours at the 4000 level or higher, in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.

4. Students must complete a minimum of 18 SPAN credit hours with CU Denver faculty.

Program Allowances and Restrictions

1. Spanish majors are advised to take MATH 1010 Mathematics for the Liberal Arts or MATH 2830 Introductory Statistics for their CU Denver Core Curriculum Mathematics requirement.
2. Courses taken at other institutions while a student is enrolled at CU Denver may be applied to the major only with departmental approval before enrollment in those courses.
3. Before enrolling in their final semester in the language, Spanish majors must be evaluated by the faculty in oral and written skills. Students must see their Spanish advisor for specific information.
4. Students must complete least six SPAN credit hours at the 4000 level.
5. Students must complete a minimum of 30 credit hours in courses taught in Spanish.

Code	Title	Hours
Complete the following required courses:		*15*
SPAN 3101	Introduction to the Study of Literature	
SPAN 3213	Contemporary Latin American Culture and Institutions	
or SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3700	Spanish for International Business I	
SPAN 3710	Spanish for International Business II	
SPAN 3782	Introduction to Translation I	
or SPAN 3792	Introduction to Translation II	
Complete one of the following Culture and Civilization courses:		*3*
SPAN 3212	Spanish American Culture and Civilization	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3221	Culture and Civilization of Spain I	
SPAN 3222	Culture and Civilization of Spain II	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture	
SPAN 3230	Ibero-American Cultures through Film	
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	
Complete a minimum of two Language Skills and Theory courses from the approved list.		*6*
Language Skills and Theory (p. 719)		
Complete an additional two SPAN elective courses at the 4000-level. [1]		*6*
Complete all of the following required Business courses:		*15*
ACCT 2200	Financial Accounting and Financial Statement Analysis	
MGMT 1000	Introduction to Business	
MGMT 3000	Managing Individuals and Teams	
MGMT 4400	Environments of International Business	
MKTG 3000	Principles of Marketing	
Total Hours		**45**

[1] All courses must be taught in Spanish. Neither SPAN 4690 Methods of Teaching Modern Languages nor SPAN 4691 Methods of Teaching Modern Languages II will not apply.

Language Skills and Theory

Code	Title	Hours
Complete at least two of the following		*6*
SPAN 3010	Spanish Composition I	
SPAN 3020	Spanish Composition II	
SPAN 3025	Writing for Latinos	

SPAN 3026	Writing for Latinos II
SPAN 3030	Spanish Oral Proficiency
SPAN 3050	Advanced Spanish Grammar
SPAN 3060	Hispanic Phonetics: Theory and Practice
SPAN 4010	History of the Spanish Language
SPAN 4020	Spanish Sociolinguistics
SPAN 4030	The Learning and Teaching of Heritage Speakers
SPAN 4040	Spanish Classroom Methods and Practice
SPAN 4060	Dialects of the Spanish-Speaking World
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition
SPAN 4076	Spanish in Colorado
SPAN 4080	Spanish in the United States
SPAN 4099	Special Topics in Linguistics

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/spanish-program/spanish-major-international-language-and-culture-professions-ilcp-track/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Chinese Studies Minor

Introduction

Please click here (p. 687) to see Modern Languages department information.

The Minor Program in Chinese Studies is an interdisciplinary program offering a specialized study of China through coursework in the related disciplines of language, anthropology, history, geography, philosophy, and political science. China's economic and political presence is increasingly prominent in the United States. CU Denver is uniquely positioned to make use of its location as the cultural, economic and political center of the Rocky Mountain region and of its diverse, well-trained and highly qualified faculty to offer a course of interdisciplinary studies related to China. Students may choose to focus either on General Chinese Studies or *Chinese Language and Culture.* On the one hand, *General Chinese Studies* encourages an interdisciplinary approach of accepting courses from various departments that focus on history, political science, art, philosophy, and more from China, Taiwan, Hong Kong, and Singapore. On the other hand, *Chinese Language and Culture* further develops students' linguistic competence and cultural awareness. The minor program offers a wide variety and levels of Mandarin Chinese language and culture courses that not only improve students' communication skills but also give a deeper look into different aspects of Chinese culture.

The program in Chinese studies offers a host of study abroad opportunities throughout the academic year and every summer. CU Denver has on-going programs at the China Agricultural University in Beijing, and programs in Taipei, as well as an association with Yunnan University in Kunming. Study abroad programs of five weeks to one year in length may be arranged, and program faculty can help students enroll in intensive Chinese language programs in Taiwan or on the mainland. Students pursuing the minor in Chinese language and area studies are encouraged to complete the program with a period of residence and study in China.

Program Director: Dr. I-hao Victor Woo
Advisor: Dr. I-hao Victor Woo
Email: i-hao.woo@ucdenver.edu

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 17 credit hours from the approved courses.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours in the minor, chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all minor courses taken at CU Denver and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U cannot complete minor or ancillary course requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved courses below.

Program Restrictions, Allowances and Recommendations

1. Courses taken at other institutions may be applied to the minor but only with approval of a Chinese faculty advisor in the Department of Modern Languages.

Code	Title	Hours
Complete the following required courses:		*8*
CHIN 1000	China and the Chinese	
CHIN 1020	Beginning Chinese II (or higher level Chinese Language course)	
Complete nine credits from the following elective courses: [1]		*9*
ANTH 4000	Special Topics in Anthropology	
ANTH 4995	Global Study Topics (must be China-related)	
CHIN 2110	Second Year Chinese I	
CHIN 2120	Second Year Chinese II	
CHIN 2970	Contemporary Chinese Cinema	
CHIN 3010	Advanced Intermediate Chinese	
CHIN 3130	Special Topics in Chinese	
CHIN 3200	Contemporary Chinese Society and Culture	
CHIN 3300	Special Topics on Chinese Film	
CHIN 3995	Global Study Topics (must be China-related)	
COMM 3230	Chinese Communication & Culture in Context	
COMM 4430	Communication, China, and the US	
COMM 4995	Global Study Topics (must be China-related)	
FINE 4524	Topics in Art History II: Modern and Contemporary Art	
FINE 4750	Arts of China	
GEOG 3160	Geography of China	
HIST 3470	Intro to East Asia: Since 1800	
HIST 4420	Traditional China: China to 1600	
HIST 4421	Modern China	
HIST 4422	Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76	
LING 2000	Foundations of Linguistics	
LING 3100	Language in Society	
PSCI 4186	East Asia in World Affairs	
PSCI 4615	Politics and Government of China	

	PSCI 4726	Seminar on U.S. and China Relations
	PSCI 4995	Global Study Topics (must be China-related)
	PHIL 3410	Asian Philosophies and Religions
	PHIL 3981	Chinese Philosophy and Culture
	RLST 3410	Asian Philosophies and Religions
	RLST 3660	Chinese Philosophy and Culture
Total Hours		**17**

[1] The Chinese Studies Program Director may approve additional courses. Students are encouraged to work with the director to devise a plan of study.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/minors/).

French Minor

Introduction

Please click here (p. 687) to see Modern Languages department information.

The French program offers courses in advanced language, linguistics, literature, civilization, culture and business, all taught exclusively in French. Students benefit from a state-of-the-art language lab with Internet access and multimedia software programs, as well as technologically "smart" classrooms.

French minors are strongly encouraged to participate in one of UC Denver's Study Abroad Programs. Please see a faculty member in French for information about opportunities to include study abroad as part of your minor.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.
- Students may declare a minor in the CLAS advising office, and should see the French advisor to discuss course selections.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 FREN credit hours.
2. Students must complete a minimum of 15 upper-division (3000-level and above) FREN credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative GPA of 2.0. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine FREN credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. The minor in French must include at least one language skills class, chosen from the classes listed below.
2. FREN 3200 The Francophone World in the Post-Colonial Era is taught in English, and does not count toward the minor.
3. All upper-division level (3000-level and above) courses must be taught in French.

Code	Title	Hours
Complete one of the following required courses:		*3*
FREN 3010	French Phonetics and Pronunciation	
FREN 3020	Conversation through Film	
FREN 3050	Advanced Grammar and Composition	
FREN 3060	Advanced French Language Skills	
Complete four additional upper-division (3000-level or higher) FREN elective courses.		*12*
All courses must be taught in French.		
FREN 3010	French Phonetics and Pronunciation	
FREN 3020	Conversation through Film	
FREN 3050	Advanced Grammar and Composition	
FREN 3060	Advanced French Language Skills	
FREN 3112	Survey of French Literature I	
FREN 3120	French Cultural Identities: Myths and Realities	
FREN 3122	Survey of French Literature II	
FREN 3130	Current Topics of the French-Speaking World (must be taught in French)	
FREN 3140	Contemporary Francophone Cultures	
FREN 3970	Special Topics (must be taught in French)	
FREN 4010	Advanced Composition: Stylistics	
FREN 4050	Advanced French for Business	
FREN 4082	Introduction to Translation	
FREN 4200	French Civilization Through the Nineteenth Century	
FREN 4210	French Civilization - Twentieth and Twenty-First Centuries	
FREN 4310	Seventeenth Century Literature	
FREN 4360	Eighteenth Century Novel, Theater and Poetry	
FREN 4430	Nineteenth Century French Novel	
FREN 4480	Twentieth Century French Novel	
FREN 4490	Twentieth Century French Theater	
FREN 4510/ WGST 4511	French Women Writers	
FREN 4520	Voices of Haiti and the Caribbean	
FREN 4600	History of the French Language	
FREN 4970	Special Topics (must be taught in French)	
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/minors/).

Linguistics Minor

Introduction

Please click here (p. 687) to see information about the Department of Modern Languages.

The minor in Linguistics is an interdisciplinary program awarded through the Department of Modern Languages. The minor is designed to guide students through an exact and structured discipline that examines various aspects of the nature of human language. A Linguistics minor may be of particular interest to students majoring in a Foreign Language, as well as majors in fields such as Anthropology, English, Communication, Education, Philosophy, and Sociology. The Linguistics minor is open to all undergraduate students at CU Denver.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on campus program.

Declaring This Minor

- Please see your advisor. To be admitted to minor status in Linguistics, students must have an overall GPA of C+ (2.3)
- Click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours from approved courses.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours in the minor, chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.5. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved courses below.

Program Restrictions, Allowances and Recommendations

1. Upon declaring a minor in Linguistics, each student will be assigned to a faculty advisor with whom the student should consult at least once per semester thereafter. It is especially important that students have their transcripts reviewed by their advisor before enrolling in their final 30 credit hours at CU Denver. Failure to do so may result in delay of graduation.
2. Courses taken at other institutions may be applied to the minor, but only with approval of a Linguistics faculty advisor in the Department of Modern Languages.

Code	Title	Hours
Complete the following program requirements:		**15**
Complete the following required courses:		*6*
LING 2000	Foundations of Linguistics	
LING 3100	Language in Society	
Complete nine credit hours from the following elective courses:		*9*
ANTH 3121	Language, Culture, and Communication	
CHIN 3130	Special Topics in Chinese	
CLDE 1000	Language, Identity, & Power: International Perspectives	
CLDE 4800	Language Development and Acquisition	
CLDE 4830	Instructional Delivery Methods for Second Language Learners	
CLDE 5030	Language Development of Multilingual Learners: Advanced	
CLDE 5820	Teaching Multilingual Learners, Advanced	
ENGL 3160	Language Theory	
ENGL 4601	Teaching English Language Learners: Theory and Practice	
ENGL 4651	Second Language Writing	
FREN 3010	French Phonetics and Pronunciation	
FREN 4600	History of the French Language	
MLNG 4690	Methods of Teaching Modern Languages	
MLNG 4691	Methods of Teaching Modern Languages II	
PHIL 2441	Logic, Language and Scientific Reasoning	
SPAN 3060	Hispanic Phonetics: Theory and Practice	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	
SPAN 4010	History of the Spanish Language	
SPAN 4020	Spanish Sociolinguistics	
SPAN 4060	Dialects of the Spanish-Speaking World	
SPAN 4070	Spanish Applied Linguistics & Second Language Acquisition	
SPAN 4076	Spanish in Colorado	
SPAN 4080	Spanish in the United States	
SPAN 4099	Special Topics in Linguistics	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/minors/).

Spanish Minor

Introduction

Please click here (p. 687) to see information about the Department of Modern Languages.

Getting a minor can help build your skills in your field of study when correctly applied to a complementing major.

A minor can also be beneficial when you know what type of career you want to get into after graduation. In many cases what you major in does not necessarily reflect what kind of career you will go into. But if you see yourself leaning toward a certain career, you can pair this somewhat unrelated major to a minor that correlates between the two.

Minoring in a language can be a great way to help you stand out from your competition in the job market.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a major/minor.
- Please see your faculty advisor to develop a plan of study.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 SPAN credit hours.
2. Students must complete a minimum of 15 upper-division (3000-level and above) SPAN credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine SPAN credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students may count up to three credit hours of Independent Study or Internship courses toward the minor.
2. Students must declare this minor prior to their final semester of coursework.
3. All course work must be taught in Spanish.

Code	Title	Hours
Complete at least one of the following required courses:		*3*
SPAN 3212	Spanish American Culture and Civilization	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3221	Culture and Civilization of Spain I	
SPAN 3222	Culture and Civilization of Spain II	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture	
SPAN 3230	Ibero-American Cultures through Film	
SPAN 3240	Food Metaphors: Ibero-American Cuisine and Culture	
SPAN 3270	Bilingual Communities: Spanish as a Language of Contact	
SPAN 4330	Modern Culture of Spain through Film and Narrative	
Complete 12 additional upper-division (3000-level and above) SPAN elective credits, taught in Spanish. [1]		*12*
Total Hours		**15**

[1] All courses must be taught in Spanish. SPAN 4690 Methods of Teaching Modern Languages and SPAN 4691 Methods of Teaching Modern Languages II will not apply.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/minors/).

Spanish for the Health Professions Undergraduate Certificate

Introduction

Please click here (p. 687) to see Modern Languages department information.

The Undergraduate Certificate in Spanish for the Healthcare Professions seeks to facilitate effective communication between healthcare professionals and their Spanish speaking patients and clients. To enhance mutual understanding, which is of critical importance within a healthcare setting, students will learn to speak, comprehend, read, and write in Spanish, with a focus on specialized vocabulary and medical communication, and will acquire intercultural competence.

This certificate is available to all students across the University, as well as non-degree-seeking professionals with a prior degree who are seeking to increase their skill set.

Program Delivery

- This program can be completed entirely online, or it can combine online and on-campus and/or Study Abroad classes approved by the certificate advisor.

Declaring This Certificate

- You must complete the **Application for the Certificate (available on the Department webpage)**. This requires an unofficial transcript from CU Denver showing that you are a current undergraduate student, or a copy of former transcripts indicating an undergraduate degree has been previously granted. This must be completed **prior** to completing the coursework (and applying for graduation, if you are a degree-seeking student) for the certificate.
- If you are a non-degree seeking student, you can apply by downloading and completing the Application for Non-Degree Admission online. After your application for admission has been approved, you will be able to enroll for certificate courses.
- For questions about the Spanish for the Health Professions certificate program contact Dr. Marisa Fernández (maria.fernandezmartinez@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Spanish for the Health Professions advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete six SPAN upper division (3000-level and above) credit hours.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete a minimum of nine credit hours from approved courses with a minimum of six SPAN credit hours, with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. If you have questions about your level of proficiency, please see the certificate advisor for guidance regarding placement.
2. Electives with a health communication focus may be approved in consultation with certificate advisor.

Code	Title	Hours
Complete the following program requirements, according to your entering Spanish proficiency level: [1]		12
A. If your level of Spanish proficiency is elementary/beginner: [2]		
Complete the following four courses:		
SPAN 1070	Spanish Medical Conversation for Beginners	
SPAN 2070	Spanish Medical Conversation for Beginners II	
SPAN 3740	Spanish for the Healthcare Professions I	
SPAN 3750	Spanish for the Healthcare Professions II	
B. If your level of Spanish proficiency is intermediate or higher:		
Complete both of the following required Spanish courses:		
SPAN 3740	Spanish for the Healthcare Professions I	
SPAN 3750	Spanish for the Healthcare Professions II	
Complete six credits from the following elective courses: [3]		
ANTH 4300	Migrant Health	
COMM 2500	Introduction to Health Communication	
COMM 4270	Intercultural Communication *	
COMM 4500	Health Communication *	
COMM 4525	Health Communication and Community (*)	
COMM 4575	Designing Health Messages *	
ETST 2108	Introduction to Chicanx and Latinx Studies	
ETST 3002	Ethnicity, Health and Social Justice	
ETST 3108	Chicano/a and Latino/a History	
HDFR 3020	Black and Latino Children in Families and Schools	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4260	Family Systems and Social Justice	
PBHL 3041	Health, Culture and Society	
PBHL 3070	Perspectives in Global Health *	
PSYC 4485	Psychology of Cultural Diversity (*)	
SOCY 4050	Health Disparities	
SOCY 4110	Sociology of Health Care (*)	

Another elective course with a health communication focus may be approved in consultation with the certificate advisor.	
Total Hours	**12**

1 If you haven't taken any classes here at CU Denver, take the placement test. You will take it in our Modern Languages Language Lab (Plaza 115). Just walk in and ask to take the test. The test results will show which level you have tested into.

2 SPAN 1070 Spanish Medical Conversation for Beginners and SPAN 2070 Spanish Medical Conversation for Beginners II should be consecutive. All other classes are more flexible.

3 Some courses may have prerequisites that apply.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/certificate-spanish-international-business/).

Spanish for International Business Undergraduate Certificate

Introduction

Please click here (p. 687) to see Modern Languages department information.

The Department of Modern Languages offers an undergraduate Certificate in Spanish for International Business for students seeking an academic credential showing that they are prepared to meet the challenges of doing business in the Spanish-speaking world.

This certificate is available to all students across the University, as well as non-degree-seeking business professionals seeking to increase their skill set and value in the international market.

Program Delivery

- This certificate can be fulfilled entirely online, or through a combination of online and on-campus courses

Declaring This Certificate

- You must complete the Application for the Certificate **(**https://clas.ucdenver.edu/modLang/sites/default/files/attached-files/application_for_certificate_in_spanish_int._business3.pdf**) (available on the Department webpage)**. This requires an unofficial transcript from CU Denver showing that you are a current undergraduate student, or a copy of former transcripts indicating an undergraduate degree has been previously granted. This must be completed **prior** to completing the coursework (and applying for graduation, if you are a degree-seeking student) for the certificate.
- To begin coursework, non-degree-seeking students will need to apply to the University as a non-degree seeking student. Once accepted, you will be able to enroll in all of the appropriate classes. The following is a link to that information: https://www.ucdenver.edu/admissions/non-degree-admissions (https://www.ucdenver.edu/admissions/non-degree-admissions/).
- For questions about the Spanish for the Health Professions certificate program contact Dr. Gabriela DeRobles (gabriela.derobles@ucdenver.edu).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Spanish for International Business advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 SPAN credit hours.
2. Students must complete all 12 SPAN credit hours at the upper division level (3000-level and above).
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All 12 SPAN credits for the certificate must be earned at the University of Colorado Denver.

Program Restrictions, Allowances and Recommendations

1. SPAN 2120 Second Year Spanish II (or equivalent proficiency) is a pre-requisite for a majority of upper division level (3000 level and higher) SPAN courses.

Required Courses

Code	Title	Hours
Complete the following courses:		*6*
SPAN 3700	Spanish for International Business I	
SPAN 3710	Spanish for International Business II	

Elective Courses

Code	Title	Hours
Complete the following required courses:		*6*
SPAN 3700	Spanish for International Business I	
SPAN 3710	Spanish for International Business II	
Complete two of the following elective courses: [1]		*6*
SPAN 2130	Current Topics in the Spanish-Speaking World (topic must be applicable to Spanish for International Business)	
SPAN 3213	Contemporary Latin American Culture and Institutions	
SPAN 3223	Contemporary Spanish Culture and Institutions	
SPAN 3225	Special Topics In Hispanic Culture (topic must be applicable to Spanish for International Business)	
SPAN 3782	Introduction to Translation I	
SPAN 3792	Introduction to Translation II	
Total Hours		**12**

[1] SPAN 2130 Current Topics in the Spanish-Speaking World and SPAN 3225 Special Topics In Hispanic Culture can be applied to the certificate with advisor approval.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/modLang/programs/certificate-spanish-international-business/).

Chinese for International Business Undergraduate Certificate

Information

Please click here (p. 687) to see Modern Languages department information.

This certificate is available to all students across the University, as well as non-degree-seeking business professionals seeking to increase their skill set and value in the international market.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Chinese for International Business advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credit hours from approved courses.
2. Students must complete six CHIN upper division (3000-level and above) credit hours.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete a minimum of nine credit hours from approved courses with a minimum of six CHIN credit hours, with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. If you have questions about your level of proficiency, please see the certificate advisor for guidance regarding placement.
2. Additional electives may be approved in consultation with certificate advisor.

Code	Title	Hours
Complete the following program requirements, according to your entering Chinese proficiency level: [1]		*12*
A. If your level of Chinese proficiency is elementary/beginner: [2]		
Complete the following three courses:		
CHIN 1071	Mandarin Chinese for the Professions	
CHIN 3071	Chinese for Business	
CHIN 3130	Special Topics in Chinese	
B. If your level of Chinese proficiency is intermediate or higher:		
Complete both of the following required Chinese courses:		
CHIN 3071	Chinese for Business	
CHIN 3130	Special Topics in Chinese (topic must be related to international business)	
Complete three-six credits from the following elective courses-one course for beginning level students and two courses for intermediate level students: [3]		
CHIN 1000	China and the Chinese	
CHIN 3130	Special Topics in Chinese (topics for elective credit can be related to anything)	
CHIN 3200	Contemporary Chinese Society and Culture	
COMM 4430	Communication, China, and the US	
ENTP 6826	International Entrepreneurship	
FINE 4750	Arts of China	
GEOG 3160	Geography of China	
HIST/CHIN 4421	Modern China	
INTB/ENTP 4028	Global Study Topics (topics must be related to China)	
INTB/MGMT 4400	Environments of International Business	
PHIL 3981/ RLST 3660	Chinese Philosophy and Culture	
PSCI 4615	Politics and Government of China	
PSCI 4186	East Asia in World Affairs	
Total Hours		**12**

[1] If you haven't taken any classes here at CU Denver, take the placement test. You will take it in our Modern Languages Language Lab (Plaza 115). Just walk in and ask to take the test. The test results will show which level you have tested into.

The certificate program aims to give students a solid foundation in business vocabulary words, basic business and cultural concepts, and intensive situational practice that will prepare them to function competently in today's Chinese-speaking world. The specialized course content will benefit students in their pursuit of individual and professional career objectives in the global marketplace. After successfully completing the requirements for the program, students will:

1. Develop geographic literacy and cultural understanding of the Chinese-speaking world.
2. Become competent with basic vocabulary and structures required to communicate and be able to discuss and translate texts and documents related to business in Chinese.
3. Reach the level of Intermediate Low of ACTFL's proficiency test.
   a. Speakers at the Intermediate Low sublevel are able to handle successfully a limited number of uncomplicated communicative tasks by creating with the language in straightforward social

situations. Conversation is restricted to some of the concrete exchanges and predictable topics necessary for survival in the target-language culture. These topics relate to basic personal information; for example, self and family, some daily activities and personal preferences, and some immediate needs, such as ordering food and making simple purchases.

b. At the Intermediate Low sublevel, speakers are primarily reactive and struggle to answer direct questions or requests for information. They are also able to ask a few appropriate questions. Intermediate Low speakers manage to sustain the functions of the Intermediate level, although just barely. Intermediate Low speakers express personal meaning by combining and recombining what they know and what they hear from their interlocutors into short statements and discrete sentences.

c. Their responses are often filled with hesitancy and inaccuracies as they search for appropriate linguistic forms and vocabulary while attempting to give form to the message. Their speech is characterized by frequent pauses, ineffective reformulations and self-corrections. Their pronunciation, vocabulary, and syntax are strongly influenced by their first language.

d. In spite of frequent misunderstandings that may require repetition or rephrasing, Intermediate Low speakers can generally be understood by sympathetic interlocutors, particularly by those accustomed to dealing with non-natives

Philosophy

Chair: Sarah K. Tyson, PhD
Program Assistant: Sulastri Carr
Department Advisor: Mark Tanzer, PhD
Office: Plaza Building, M 108
Telephone: 303-315-7223

Overview

The philosophy program offers a rigorous liberal arts education. It trains students to speak and write carefully, think and reason critically, and seek out creative connections between ideas of all kinds. Philosophy is an excellent preparation for almost any professional field. Philosophical inquiries can cover a wide range of subject matters including ethics and politics, art and literature, history and religion, technology, and the sciences. The benefits of a philosophy degree last a lifetime, setting students on a path toward self-development, intellectual sophistication, and the enrichment that comes from living a more reflective life.

Undergraduate Information

The philosophy program involves the study of three major periods: ancient, modern, and contemporary philosophy.

Click here (p. 740) to learn about the requirements for the Major in Philosophy.

Click here (p. 746) to learn about the requirements for the Minor in Philosophy.

Click here (p. 744) to learn about the requirements for the Minor in Ethics.

Click here (p. 747) to learn about the requirements for the Minor in Philosophy of Science.

Honors Program

Requirements for honors are the following:

1. Course Performance
    a. *Cum laude,* 3.4 GPA within the major, 3.3 overall GPA
    b. *Magna cum laude,* 3.6 GPA within the major, 3.5 overall GPA
    c. *Summa cum laude,* 3.8 GPA within the major, 3.7 overall GPA
2. Thesis

Majors desiring to graduate with honors in philosophy must enroll in PHIL 4950 Honors Thesis for a minimum of 3 hours and a maximum of 6 hours (note that these hours are in addition to the 36 hours required for the philosophy major) and complete research that culminates in a thesis and oral examination. Majors must work with two faculty members during the project. Written proposals must be submitted and approved by the faculty committee prior to the beginning of the project. If the completed thesis and oral exam are deemed worthy of honors, the student will be awarded the honors consistent with his or her GPA. However, to receive the highest honors (summa cum laude), the faculty committee must designate the performance for both the written thesis and the oral defense as worthy of graduation with the highest honors. If the faculty committee makes no such designation, students will graduate magna cum laude.

Graduate Information

Please click here (p. 742) for more information about the 4+1 Philosophy to Master of Humanities well as the graduate program philosophy through the CU Denver Masters of Humanities Program's Philosophy and Theory Track. (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/humanities/humanities-mh/#degreerequirementstext)

For admissions to the 4+1 Philosophy to Master of Humanities, the deadlines to apply to the program are as follows:

November 1 (for entering the spring semester)

April 1 (for entering the summer semester)

May 1 (for entering the fall semester)

Programs Offered

- Philosophy, BA (p. 740)
- Philosophy, 4 + 1 BA/ Humanities, MH (p. 742)
- Ethics Minor (p. 744)
- Philosophy Minor (p. 746)
- Philosophy of Science Minor (p. 747)

Faculty

Professors:

David L. Hildebrand, PhD, University of Texas, Austin
Robert Metcalf, PhD, Pennsylvania State University
Candice Shelby, PhD, Rice University
Mark Tanzer, PhD, Stony Brook University

Associate Professors:

Sarah K. Tyson, PhD, Vanderbilt University
Gabriel Zamosc-Regueros, PhD, University of Michigan

Assistant Professors:

Boram Jeong, PhD, Duquesne University

Clinical Teaching Track:

Jeffrey Golub, PhD, The New School for Social Research

Senior Instructors:

Brian Lisle, PhD, Loyola University of Chicago
William (Darryl) Mehring, PhD, University of Colorado

Philosophy (PHIL)

PHIL 1012 - Truth, Reality, and the Good Life: Introduction to Philosophy (3 Credits)
We're commonly told to "do the right thing," and everybody seems to agree that we should. But what is right? What is wrong? How can we see and know the difference? This course helps students examine and analyze the ethical concepts, situations, and problems raised by these fundamental questions. Specific problems will vary with contemporary concerns, e.g., poverty, war, injustice, famine, abortion, punishment, and environmental sustainability. The course goal is to help students sharpen their ethical reasoning skills so they can better navigate and contribute to the ethical, social, and political arenas in which they will live their lives. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

PHIL 1020 - Right, Wrong, and Seeing the Difference: Introduction to Ethics (3 Credits)
We're commonly told to "do the right thing," and everybody seems to agree that we should. But what is right? What is wrong? How can we see and know the difference? This course helps students examine and analyze the ethical concepts, situations, and problems raised by these fundamental questions. Specific problems will vary with contemporary concerns, e.g., poverty, war, injustice, famine, abortion, punishment, and environmental sustainability. The course goal is to help students sharpen their ethical reasoning skills so they can better navigate and contribute to the ethical, social, and political arenas in which they will live their lives. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

PHIL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PHIL 1700 - Philosophy and the Arts (3 Credits)
Considers philosophical questions involved in the analysis and assessment of artistic expressions and of the objects with which the arts, including the literary arts, are concerned. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 2441 - Logic, Language and Scientific Reasoning (3 Credits)
Intro course in argumentation, critical thinking and scientific reasoning. Covers rules of logical inference, informal fallacies, problem solving, and probabilistic reasoning. Enhances analytical and critical thinking skills tested on LSAT and MCAT, central to advancement in sciences, and broadly desired by employers. Max Hours: 3 Credits. Term offered: spring, summer, fall. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

PHIL 2510 - Philosophy of Nature (3 Credits)
Critical comparison of different views of nature presupposed in science, art, religion, and environmental policy. Concepts of "natural" are examined in relation to such issues as animal rights, wilderness preservation, synthetic landscape, technology, pollution, and population control. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: 15 hours of 2.75 GPA. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PHIL 3002 - Ancient Greek Philosophy (3 Credits)
What is philosophy? What is the nature of reality? What is the difference between knowledge and opinion? What is the best kind of life for a human being to lead? Ancient Greece was the birthplace of Western philosophy, and this course traces the history of ancient Greek thought, from Homer and Hesiod through the pre-Socratic thinkers (e.g. such figures as Thales, Pythagoras, Heraclitus, Parmenides, Zeno of Elea, Empedocles, Anaxagoras and Democritus) to Plato, Aristotle and later Hellenistic thought. Cross-listed with PHIL 5002. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, INTS 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 3010 - Medieval Philosophy (3 Credits)
History of philosophy from Augustine through Scotus and Ockham, the 5th through the 14th centuries. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3022 - Knowledge, Perception, and the Search for Objectivity: Modern Philosophy (3 Credits)
How does physical matter relate to minds and the mental realm? How does objective reality related to what seems subjective — human knowledge, perception, and feeling, etc.? What is the role of logical thinking in connecting the objective and subjective areas of reality? Can philosophy ground knowledge so that scientific inquiry is safe from the challenges of skepticism? These are just a few of the problems posed by the “modern” period in philosophy, from roughly the end of the 16th century to the end of the 18th century. This course examines such epistemological questions and surveys key metaphysical themes that modern thinkers inherited from ancient and medieval philosophy. Figures typically include Descartes, Leibniz, Spinoza, Locke, Hume, and Kant, among others. Cross-listed with PHIL 5022. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3030 - Philosophies of the Good Life & Happiness (3 Credits)
Examines concepts and theories of happiness and their application in everyday living as discussed by major philosophers since antiquity (e.g., Aristotle, Kant, Nietzsche). Also considers critiques of Happiness (e.g., Freud, Schopenhauer). Recommended preparation: PHIL 1012 or PHIL 1020. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PHIL 3032 - Twentieth Century Analytic Philosophy (3 Credits)
Surveys representative philosophers, methods, and problems in the 20th century analytic tradition. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3050 - Propaganda: Truth, Lies, and Freedom (3 Credits)
All who live in this world must choose what to do. Some of those choices can rely on first-hand experience, but most rely on information, facts, and descriptions from external sources. As every programmer will tell you, "Garbage in, garbage out." Thus, getting "good" information is critical to our ability to live freely, autonomously, and ethically. It is typical for philosophy classes to teach logic and reasoning -- and those are important. But reasoning is useless if its content (or information) is deceptive, misleading, or incoherent. What's more, since democratic countries are premised upon knowledgeable citizens, the short-circuiting of reasoning by propaganda may be the greatest danger democracy has. The question becomes: what is propaganda? How do we define it? How do we locate it? And finally, how do we spell out what's (possibly) wrong with it? Accordingly, this course is an inquiry into the epistemic, technological, and ethical dimensions of propaganda. It will define propaganda, identify how it works, and seek to understand the variety of agents and motives who use propaganda to achieve their ends. (It is not assumed that propaganda is always good or always bad, by the way.) In addition to understanding the logical and epistemic nature of propaganda, this course will examine how it is disseminated. How do technologies (text, video, social media, algorithms, etc.) influence and foment misinformation? The overarching goal will be to become more aware and critical of propaganda we encounter so we can avoid "garbage" information which can manipulate us and prevent us from reasoning logically and ethically. Cross-listed with PHIL 5050. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3150 - History of Ethics (3 Credits)
Surveys the ethical thought of major figures in the history of philosophy, beginning with Plato and ending with the 19th century. Examples: Aristotle, Hume, Kant and Mill. (Class readings of primary philosophical texts.) Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3200 - Justice, Freedom, and Power: Social and Political Philosophy (3 Credits)
What is justice? What justifies a government as moral? Why should individuals obey the state’s laws? Can anarchism work? Is private property necessary to a free society? Is social justice? What is freedom — and what is oppression? Is gender, ethnic, and religious diversity necessary for a just society? Why? This course will raise these kinds of questions as it examines basic issues in social and political philosophy (e.g. justice, freedom, individuality, power and community). Cross-listed with PHIL 5200. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3250 - Business, Society, and Moral Responsibility (3 Credits)
Is business ethics an oxymoron? Of course not. But everyone in business, from the CEO to the new assistant, truly succeeds if they can address ethical problems with empathy and imagination. This course teaches students to deploy philosophical tools — logic and moral theory — to size up and solve contemporary moral issues in business. Topics may include corporate responsibility, advertising and manipulation, privacy and surveillance, equity and inclusion, and the tension between profit maximization and the duty to our fellow human beings. The larger meaning and purposes of work may also be addressed. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3280 - War and Morality (3 Credits)
Attempts to identify and analyze some of the major moral issues of war. When is a war just, when is it not? What are morally acceptable rules of engagement? What, if anything, justifies violating them? How does one evaluate terrorism and war against terrorism? What are moral alternatives to the violence of war? Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3300 - Special Topics in Philosophy (1-3 Credits)
Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 3340 - Investigating Nature: Introduction to the Philosophy of Science (3 Credits)
This course is designed to introduce students to the Philosophy of Science. (No background in philosophy is required.) Philosophy of Science is concerned with how best to use observation and experiment to learn about the world, whether we are investigating fundamental physical structures, the complex operations of biological organisms, or the social dynamics of human groups. Drawing on both historical and contemporary works, we will seek to understand, among other topics, what makes scientific inquiry distinct from other forms of human learning, what accounts for the credibility and objectivity of scientific claims, the influence of psycho-social biases on observation and theory formation, as well as whether accepting a scientific theory, explanation or hypothesis means that we think it is true. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3350 - Metaphysics (3 Credits)
Studies major theories of reality, including topics such as the nature of substance, space and time, and universals and particulars. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3360 - Epistemology (3 Credits)
Study of major theories of knowledge, including such problems as perception and the distinction between belief and knowledge. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3410 - Asian Philosophies and Religions (3 Credits)
We in the Western world encounter a vastly different world, a radically different "universe of meaning," when we examine the traditions of the East. Even what we tacitly assume to be "real" is claimed by the Hindus and Buddhists of India to be a grand illusion. The world of China is, again, very different from India. An examination of Tibetan and Japanese religious forms will conclude our study of Asian thought. Cross-listed with RLST 3410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

PHIL 3430 - How to think green: Environmental Ethics (3 Credits)
Is it wrong to extinguish a species? What makes cruelty to animals wrong? Do trees have rights? Is the earth a resource we can use any way we want? Is vegetarianism a more ethical way to live — or just another lifestyle choice? As citizens of the world, we are bombarded by such questions. Understanding what is fundamental clarifies thinking and coordinates action. This course introduces ethical theories relevant to problems such as animal and species welfare, deforestation, pollution, climate change, and the sustainability of the planet. By examining multiple perspectives, students gain confidence judging which issues and data are significant and deciding what kind of world we should create with our actions and inactions. Cross-listed with PHIL 5430, HUMN 5430 and SSCI 5430. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3440 - Introduction to Symbolic Logic (3 Credits)
Covers truth functional and quantificational logic through polyadic first order predicate calculus and theory of identity. Attention is given to such problems in metatheory as proofs of the completeness and consistency of systems of logic. Prereq: A passing grade in PHIL 2441 or MATH 3000 or permission from the instructor is required in order for students to enroll in this course. Cross-listed with MATH 3440. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHIL 2441 or MATH 3000
Typically Offered: Spring.

PHIL 3441 - Philosophical Reasoning Skills (3 Credits)
This course provides Philosophy majors and other philosophically interested students with the skills and tools necessary for effectively navigating philosophical discussions. In this course we will cover issues such as validity and soundness, as well as several systems useful for demonstrating validity. The course will in addition address important issues in the philosophy of language, including the very important question of definitions, as well as the use of thought experiments and avoidance of informal fallacies. Finally, since philosophical reasoning increasingly involves knowledge of the methods of scientific reasoning, those skills will also be included in the course. Cross-listed with PHIL 5441. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3500 - Ideology and Culture: Racism and Sexism (3 Credits)
What is “racism” or “sexism”? What is oppression? How do these ideas become invisible so that they structure ways people think, act? How do they inform policies, laws, and institutions? And what modifies or overturns such ideas? By answering such questions, this course helps students reflect on the formation of their own lives, practices, beliefs, and values. Topics may include ideology theory, naturalism, the equal protection clause, recent scientific discussions, socio-legal history, and social constructionism. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

PHIL 3550 - Philosophy of Death and Dying (3 Credits)
Historical overview of the metaphysical question of whether there is life after bodily death, beginning with classical arguments through the current debate over such phenomena as near death experiences and deathbed visions. Also focuses on ethical controversies such as suicide, euthanasia, and capital punishment, and the efficacy of philosophical consolations for grief. Strongly Recommended: Three hours of philosophy; preferably PHIL 1012 but if the student does not have coursework, consulting with the instructor prior to registration is strongly recommended. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3656 - Contemporary Religious Ethics: Jewish and Christian Traditions (3 Credits)
Historical and thematic introduction to ethics in Judaism, Roman Catholicism and Protestantism. A study of selected ethical issues: bio-medical, social justice, sexuality, economic justice, business and personal ethics. Strongly Recommended: English Composition, Intro to Philosophy, World Religions, World History or junior status. If the student does not have coursework or standing, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PHIL 3760 - Kant: Freedom, Reality, and the Mind (3 Credits)
Why do motives matter in ethics? What is an ethical duty? How do sensations and ideas combine to make reality unified and coherent? Kant's philosophy answers these questions by providing a profound synthesis of the philosophers before him. Kant's work still influences ethics, politics, metaphysics, epistemology, and science today. This course involves students in close study of Kant's revolutionary thought as it appears in several of his major works. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5830. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3833 - Existentialism (3 Credits)
Examines one of the most influential movements in recent European thought, beginning with existentialism's 19th century roots, and continuing on to the existentialist philosophers of the 20th century. Figures covered may include Dostoyevsky, Kierkegaard, Nietzsche, Heidegger, Sartre and de Beauvoir. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5833, HUMN 5833, and SSCI 5833. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA

PHIL 3981 - Chinese Philosophy and Culture (3 Credits)
China is a fascinating world with its own characteristic orientation to philosophical questions. Chinese thinkers produced the "Flowering of a Hundred Schools of Thought" in the Axial Age, the same period of time in which philosophy was coming to birth in ancient Greece. Covers some of the Chinese schools, including Confucianism, Taoism, Mohism, Legalis, Chinese "logic," and the later schools of schools of Neo-Confucianism, Neo-Taoism and Chinese Buddhism. Cross-listed with RLST 3660. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3995 - Global Study Topics (1-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PHIL 4000 - 19th and 20th Century Continental Philosophy (3 Credits)
A seminar on key problems and thinkers in the nineteenth & twentieth century continental philosophical traditions and their contemporary significance. Cross-listed with PHIL 5000, HUMN 5000 and SSCI 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4040 - Skepticism (3 Credits)
Considers various forms of skepticism in the history of philosophy, as well as the ways that philosophers have responded to skepticism, especially in theories of belief. Note: PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5040. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4101 - Pragmatism: Classical American Philosophy (3 Credits)
The most significant philosophical tradition born in the United States is pragmatism. Examines several of the most important classical works of this tradition, the influence of thinkers who have helped to shape pragmatism, and the contemporary relevance of this tradition. Figures who may be included are: Emerson, Pierce, Royce, James, Dewey, Mead and Rorty. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5101, HUMN 5101, SSCI 5101. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4150 - Twentieth Century Ethics (3 Credits)
Surveys representative philosophers, methods, and/or problems in 20th century ethics. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4200 - Philosophical Problems and Contemporary Culture (3 Credits)
Issues and controversies in contemporary culture, their relation to modern theories of society, and their manifestations in the arts, science and technology, education, religion and ethics. PHIL 3002 or 3022, and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4220 - Art, Beauty, and Aesthetic Criticism: Philosophy of Art (3 Credits)
What makes something a work of “art”? How should art be interpreted or evaluated? Can we really debate about “taste” or beauty? Why do we call some people "artists" or some experiences “aesthetic”? Where does creativity come from? This course investigates such questions, offering a range of historical and contemporary answers, and examines the social, political, and philosophical roles of art in contemporary society. Methods of engaging these questions may include multimedia technologies as well as individual and group field trips to local art venues. Cross-listed with PHIL 5220 and HUMN 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4230 - Postmodernism (3 Credits)
Traces the history of a set of ideas collectively known as postmodern. Disrupting traditional frameworks of knowledge, these concepts have had an enormous impact on the social sciences, the humanities, and the arts. Course readings expose students to the cross-disciplinary impact of postmodernism on theory, content, and method. Upper division standing, PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4242 - Medicine, Health Care, and Justice: Bioethics (3 Credits)
Anyone entering a medical profession must confront tough ethical issues and dilemmas. These often arise suddenly, so practitioners best preparation is to think ahead about what will likely occur. This course introduces students to a variety cases and philosophical theories useful to healthcare careers. For example, What is “health” and who determines it? Is there a right to health care? How should medical scarcity (vital organs, vaccines, supplies, etc.) be addressed? What duties are owed to patients by healthcare providers, and why? On what grounds may medical treatment be demanded — or refused? The goal of the class is to train students to be nimble and imaginative in how they reason about the difficult cases they will face in their career. Suggested prerequisite one or two previous courses in philosophy, and a minimum grade of C in each course are strongly recommended; if the student lacks this coursework, consult with the professor prior to registration. Cross-listed with PHIL 5242, SSCI 5242, HUMN 5242. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4260 - Why Obey the Law? Introduction to Philosophy of Law (3 Credits)
What is a legal “law”? What justifies its ability to force our compliance? How is law distinct from morality? What makes some laws immoral? Is ignorance of the law ever a valid excuse? We all find ourselves entangled with the law at some point. Sometimes we’re the victim and sometimes we stand accused; even beyond those special circumstances, we all have to live with the law and the many ways it regulates (or controls) our conduct. While this course is recommended for pre-law students, this course will every students to be intellectually critical of what law is, how it can and is justified, and how to assess it on grounds that reach beyond to law, such as logic or ethics. Both historical and contemporary sources will be used to survey theoretical positions on the nature of law. Figures may include (among others): Plato, Aristotle, Aquinas, Locke, Kant, Holmes, Mackinnon, Dworkin, Hart, Devlin, as well as more contemporary Supreme Court justices and case law. Suggested prerequisite one or two previous courses in philosophy, and a minimum grade of C in each course are strongly recommended; if the student lacks this coursework, consult with the professor prior to registration. Cross-listed with PHIL 5260. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4270 - Philosophy of History (3 Credits)
Examines critical and speculative theories of history, including the problems of methodology, explanation, values, and the relationship between history and social philosophy. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4300 - Mind, Body, and Consciousness: Philosophy of Mind (3 Credits)
Consideration of the problems in the philosophy of mind, such as the mind-body problem, the problem of our knowledge of other minds, the compatibility of free will and determinism, and discussion of such concepts as action, intention, motive, desire, enjoyment, memory, imagination, dreaming and self-knowledge. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5300. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 4308, ENGL 5308, PHIL 5308, WGST 4308, WGST 5308. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4341 - Latin American Philosophy (3 Credits)
This course introduces students to Latin American Philosophy by exploring its indigenous roots, its recurring themes of struggle against colonial domination, and the way this tradition works with and against European and Anglo-American philosophical ideas. Students will also learn about how questions of identity, especially those of ethnicity, have developed within this area of philosophy. Cross-listed with PHIL 5341. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 4350 - Philosophy of Science (3 Credits)
This course examines some of the central philosophical questions concerning the nature of scientific investigation, such as the logical relation of evidence to hypothesis, the objective adjudication of competing hypotheses, the logical function of modeling in empirical inquiry, the criterion for a classificatory system to underwrite induction and explanation, the explanatory relationships between the differing sciences, as well as the theoretical and pragmatic function of scientific law and its relationship to explanation. Cross-listed with PHIL 5350. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4360 - American Legal Process (3 Credits)
Introduces students to basic issues in American jurisprudence as well as to the elements and dynamics of the modern American legal system. Cross-listed with PHIL 5360. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4450 - Punishment and Social Justice (3 Credits)
We will use the critical tools of philosophy to think about how contemporary practices of punishment are justified, how they shape the world we live in and what alternative normative frameworks might be. Cross-listed with PHIL 5450. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4460 - Theories of Human Nature (3 Credits)
Consideration of such problems as the changeability and definability of human nature, and the possibility of a science of human nature. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4470 - Concepts of the Soul (3 Credits)
Asks the questions: What is the nature of the human being? What makes us "human?" Do humans have a "soul?" What is its nature? Is it different from the "spirit?" What is its ultimate fate? Examines the various theories put forward by philosophers of both Eastern and Western traditions. Cross-listed with PHIL 5470 and RLST 4440, 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4480 - Perspectives on Good and Evil (3 Credits)
Examines "problem of evil" as formulated in the philosophical tradition. Presents classical formulation of the problem, traditional solutions & classical critiques of each answer. Considers perspectives of various religious orientations, which deal differently with the question of suffering. Cross-listed with PHIL 5480, RLST 4480/5480. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4500 - Feminist Philosophy (3 Credits)
Seminar on key debates & figures in historical & contemporary feminist philosophy. Topics may include: rights, embodiment, gender, sexuality, race, reason, & violence. Figures may include: Wollstonecraft, Stanton, Beauvoir, Judith Butler, and bell hooks. Cross-listed with PHIL 5500, WGST 4500 & 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4600 - Questioning Religious Belief and Practice: Introduction to Philosophy of Religion (3 Credits)
Does God exist? Can the existence of God be proved? When is believing on faith acceptable? How or why is there a “problem of evil”? What are the attributes of a "god" and how can they be known, if at all? What is the relation of God to the world we experience? How does morality relate to religious belief and practice? The goal of the course is to broaden and deepen our understanding of key philosophical debates within religious traditions as we study prominent thinkers in the history of philosophy. Cross-listed with HUMN 5600, PHIL 5600, RLST 4060, RLST 5060, and SSCI 5600. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PHIL 4700 - Seminar in a Major Philosopher (3 Credits)
The major philosophical texts of one philosopher is studied in this course. Philosophers to be studied are major figures in the history of philosophy such as Plato, Aristotle, Kant and Hume. Note: May be taken for credit more than once. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

PHIL 4720 - Eastern Religious Thought (3 Credits)
Parallels the course in Western religious thought. The great religious traditions of the East, including Hinduism, Buddhism, Confucianism, and Taoism, are examined as they are presented in the writings of key philosophical representatives of each tradition. Cross-listed with RLST 4080. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4730 - Philosophy and Literature (3 Credits)
Considers the philosophical dimensions of literature. Strongly Recommended: PHIL 3002 or 3022, and a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5730, ENGL 4735 and 5735. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4735 - Rationalism (3 Credits)
Addresses the fundamental questions of truth and reality through natural reason. Topics vary and may include metaphysics and the rise of modern science; women and the enlightenment; historical problems and linguistic analysis. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5735. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4740 - Empiricism (3 Credits)
Considers the nature and importance of experience. Focuses on British Empiricism, but additional themes which vary may include: American pragmatism, logical positivism, scientific empiricism, phenomenology of experience. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5740. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4750 - Introduction to Phenomenology (3 Credits)
Examines the contribution of phenomenology to selected topics in the theory of meaning, philosophy of mind, ontology, and epistemology, through a study of such philosophers as Husserl, Heidegger, Sartre and Merleau-Ponty. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5750. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4755 - Philosophical Psychology (3 Credits)
Explores debates about psyche and body, mind and world, self and others, and consciousness and nature. Examines the philosophical questions related to those debates that arise within theories of perception, affect and cognition offered by influential psychological models. Cross-listed with HUMN 5750, SSCI 5750 and PHIL 5755. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4770 - Hegel (3 Credits)
A systematic study of the thought of G.W.F. Hegel through his most important and influential works: The Phenomenology of Spirit; The Encyclopedia of Philosophical Sciences; The Science of Logic; Lectures on the Philosophy of History; and his lectures on the history of philosophy, art and religion. Focus of the course varies. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4780 - Heidegger (3 Credits)
Studies the thought of Martin Heidegger, one of the most important philosophers of the 20th century. Includes texts from both Heidegger's early and later periods, and focuses on his analyses of human subjectivity and being. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4790 - Nietzsche (3 Credits)
A close study of Nietzsche's philosophical writings, with attention to his significance for philosophy in the 20th century and beyond. Cross-listed with PHIL 5790. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4795 - Marx and Marxism (3 Credits)
A close study of the most influential works of Karl Marx and subsequent theorists who provide either an influential interpretation of the works of Marx or contribute to an innovative application or elaboration of the basic tenets of Marxism. Cross-listed with PHIL 5795. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4800 - Plato (3 Credits)
A careful study of Plato's writings, emphasizing the dialogue form, and discussion of Plato's significance for the history of ethics, political theory, psychology, metaphysics and epistemology. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5800. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4810 - Aristotle (3 Credits)
Examines Aristotle's systematic philosophy and discusses its contributions to logic, epistemology, physics, psychology, metaphysics, ethics and political theory. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5810. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4812 - Special Topics in Philosophy (3 Credits)
Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

PHIL 4820 - Hume (3 Credits)
Considers the work of eighteenth century philosopher David Hume. Emphasis on unity of Hume's thought. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5820. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4840 - Independent Study: PHIL (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PHIL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 4900 - John Dewey (3 Credits)
John Dewey was one of the most important of the American philosophers and public intellectuals of the twentieth century. Topics may include Dewey's philosophical naturalism, pragmatist epistemology, process metaphysics and philosophies of experience, aesthetics, religion, technology and democracy. Cross-listed with PHIL 5900. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4920 - Philosophy of Media and Technology (3 Credits)
A philosophical examination of interrelationships between contemporary media, technology, and their impacts upon character of contemporary life and values. Topics may include ethics, epistemology, democracy, advertising, media literacy and criticism. Cross-listed with PHIL 5920, HUMN 5920, SSCI 5920. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4933 - Philosophy of Eros (3 Credits)
What does it mean to understand philosophy as an erotic activity? This question will be examined, first by studying Plato's dialogues-such as Lysis, Symposium and Republic-and then by reading texts from Sigmund Freud, Michael Foucault and others. Cross-listed with PHIL 5933, WGST 4933/5933, SSCI 5933 and HUMN 5933. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4950 - Honors Thesis (3-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Report as Full Time.

PHIL 4980 - Special Topics in Philosophy (1-3 Credits)
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

Philosophy, BA

Department Contacts

Sarah Tyson, PhD, Associate Professor and Department Chair (sarah.tyson@ucdenver.edu)
Mark Tanzer, PhD, Professor and Department Advisor (mark.tanzer@ucdenver.edu)
Sulastri Carr, Program Assistant (sulastri.carr@ucdenver.edu)
Main Phone: 303-315-7223

Introduction

Please click here (p. 731) to see the Philosophy department information.

The philosophy program offers a rigorous liberal arts education. It trains students to speak and write carefully, think and reason critically, and to seek out creative connections between ideas of all kinds. Philosophy is an excellent undergraduate preparation for almost any professional field. Philosophical inquiries can cover a wide range of subject matters including ethics and politics, art and literature, history and religion, technology, and the sciences. The benefits of a philosophy degree last a lifetime, setting students on a path toward self-development, intellectual sophistication, and the enrichment that comes from living a more reflective life.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Contact department advisor Mark Tanzer (mark.tanzer@ucdenver.edu) for more information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Degree Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 36 PHIL credit hours.
2. Students must complete a minimum of 27 upper-division (3000-level and above) PHIL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 PHIL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Courses taken at other institutions must either be transferred as direct equivalent to a CU Denver course or be approved by an advisor in the Philosophy Department for application towards the major.
2. For those students who both major in philosophy and minor in ethics, philosophy or philosophy of science, up to two courses can satisfy the requirements for both.
3. For those students who qualify for and fulfill the requirements of graduation with Honors, a minimum of 39 PHIL credit hours is required.
4. Though certain courses may satisfy different requirements, no single course may count for more than one requirement towards the Philosophy Major.
5. Courses not specifically listed here but offered by the University may count toward the degree upon the approval of the Department Undergraduate Advisor.

Code	Title	Hours
Complete the following required courses:		*9*
PHIL 3002	Ancient Greek Philosophy	
PHIL 3022	Knowledge, Perception, and the Search for Objectivity: Modern Philosophy	
PHIL 3760	Kant: Freedom, Reality, and the Mind	
Complete one of the following Logic and Reasoning courses:		*3*
PHIL 2441	Logic, Language and Scientific Reasoning	
PHIL 3440	Introduction to Symbolic Logic	
PHIL 3441	Philosophical Reasoning Skills	
Complete one of the following Social/Political Philosophy courses:		*3*
PHIL 3050	Propaganda: Truth, Lies, and Freedom	
PHIL 3200	Justice, Freedom, and Power: Social and Political Philosophy	
PHIL 3280	War and Morality	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 4500	Feminist Philosophy	
PHIL 4450	Punishment and Social Justice	
PHIL 4600	Questioning Religious Belief and Practice: Introduction to Philosophy of Religion	
Complete one of the following Ethics courses:		*3*
PHIL 3030	Philosophies of the Good Life & Happiness	
PHIL 3150	History of Ethics	
PHIL 3250	Business, Society, and Moral Responsibility	
PHIL 3430	How to think green: Environmental Ethics	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 3550	Philosophy of Death and Dying	
PHIL 4150	Twentieth Century Ethics	

PHIL 4220	Art, Beauty, and Aesthetic Criticism: Philosophy of Art	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PHIL 4260	Why Obey the Law? Introduction to Philosophy of Law	
PHIL 4600	Questioning Religious Belief and Practice: Introduction to Philosophy of Religion	
Complete one of the following Continental Philosophy courses:		*3*
PHIL 3833	Existentialism	
PHIL 4500	Feminist Philosophy	
PHIL 4780	Heidegger	
PHIL 4790	Nietzsche	
Complete one of the following American or Analytic Philosophy courses:		*3*
PHIL 3032	Twentieth Century Analytic Philosophy	
PHIL 3350	Metaphysics	
PHIL 3360	Epistemology	
PHIL 4101	Pragmatism: Classical American Philosophy	
PHIL 4300	Mind, Body, and Consciousness: Philosophy of Mind	
PHIL 4350	Philosophy of Science	
PHIL 4900	John Dewey	
PHIL 4920	Philosophy of Media and Technology	
Complete one of the following History of Philosophy courses:		*3*
PHIL 3010	Medieval Philosophy	
PHIL 3833	Existentialism	
PHIL 4000	19th and 20th Century Continental Philosophy	
PHIL 4040	Skepticism	
PHIL 4220	Art, Beauty, and Aesthetic Criticism: Philosophy of Art	
PHIL 4230	Postmodernism	
PHIL 4735	Rationalism	
PHIL 4740	Empiricism	
PHIL 4770	Hegel	
PHIL 4780	Heidegger	
PHIL 4790	Nietzsche	
PHIL 4795	Marx and Marxism	
PHIL 4800	Plato	
PHIL 4810	Aristotle	
PHIL 4820	Hume	
Complete nine additional Philosophy elective credits, with at least three credits being at upper division (3000 or above) courses		*9*
Total Hours		**36**

Student Learning in the B.A. in Philosophy focuses on the following:

- Recognize and comprehend the salient elements of philosophy's significant historical figures, periods, and areas.
- Understand how philosophical frameworks and theories expand the meanings and implications of existing cultural areas (e.g. those found in science technology, the arts, politics, medicine, and social justice.

More specifically, the above includes training (most typically in writing) about how to:

- Interpret texts by careful reading and synthesis of meanings.
- Identify and criticize philosophical arguments.
- Develop original arguments supported by texts and logical reasoning.
- Outline major philosophical frameworks.

For questions and answers, please reach out to Mark Tanzer (mark.tanzer@ucdenver.edu) for further details.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/philosophy/programs/bachelor-arts-major-philosophy/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/#CLAS).

Philosophy, 4 + 1 BA/ Humanities, MH

Introduction

Please click here (p. 731) to see Philosophy department information.

The 4+1 accelerated Master's program in Philosophy is an expedited program of study that allows students to complete a Bachelor's degree in Philosophy and a Master's degree in Humanities in as few as 5 years.

Upon acceptance, students are allowed to take some graduate-level courses during their remaining semesters of undergraduate study. Up to defined limits, such classes may count both towards satisfying the requirements of the BA major and the MH Masters in Humanities. Ideally arranged, a student could take 5 dual-counted courses so that by the time of BA completion they are approximately halfway done with their graduate degree. This program is intended for outstanding undergraduate Philosophy majors who have demonstrated graduate-level academic skills and can do graduate-quality work as undergraduates.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

Application deadlines are as followed:

- November 1 – Spring Semester admission
- April 1 – Summer Semester admission
- May 1 – Fall Semester admission

Contact department advisor Mark Tanzer (mark.tanzer@ucdenver.edu) for more information.

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
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- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BA degree in Philosophy, they may also complete some of the requirements for an Master's in Humanities program by participating in the BA/ MH program using the following guidelines:

1. The student must apply and be accepted for participation in the program prior to completion of the BA degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students will follow the undergraduate curriculum for the Philosophy BA (p. 740) and work closely with their faculty advisor to begin taking Philosophy graduate level coursework as they complete their undergraduate degree.
3. Students must complete a minimum of 36 PHIL credit hours applied to the BA.
4. Students must complete a minimum of 27 upper-division (3000-level and above) PHIL credit hours and no more than 15 graduate (5000-level and above) credit hours.
5. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements. Courses completed with grades below the letter grade of B- (GPA 2.7) may not be applied toward fulfillment of the requirements for any graduate degree within Graduate Education.
6. Students must complete a minimum of 18 undergraduate PHIL credit hours with CU Denver faculty and all graduate-level coursework with CU Denver faculty.
7. Students may complete a maximum of 15 credits as an undergraduate that will apply to both their undergraduate and graduate degrees. These courses must be 4000 or 5000 level and should be selected in consultation with undergraduate and graduate advisors.
8. Students should officially declare their intent to complete this program by their junior year and apply to the graduate program during the semester in which they intend to complete their BA.
9. Application requirements may differ from the traditional 2 year MH, which is why students need to work closely with faculty advisors and the philosophy departmental advisor for more information and to ensure they are following the best track to complete coursework so that they only have one year after completing the undergraduate degree, to complete the graduate requirements.

Student Learning Outcomes for the Undergraduate Student

Philosophy is a discipline that teaches students skills for thinking critically, systematically, and imaginatively about fundamental issues that arise both in everyday life and through other disciplines. Philosophy develops these skills in students through their application to a variety of subject matters and relevant issues. The subject matters range both historically (from ancient to contemporary periods) and topically (including ethics, the arts, social and political issues, religion, metaphysics, epistemology, science, and technology, among others). The educational outcome of applying philosophy's skills to the rich range of subject matters is one of the most rigorous intellectual preparations possible in undergraduate education. Such preparation orients and strengthens students for future careers in communication, law, medicine, business, government, teaching, and social services.

To learn more about the undergraduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/philosophy/programs/bachelor-arts-major-philosophy/).

Student Learning Outcomes for the Graduate Student

When students complete either the MH or MSS degree we want them to have the ability to demonstrate the "capacity to integrate knowledge and modes of thinking drawn from two or more disciplines to produce a cognitive advancement…in ways that would have been unlikely through single disciplinary means." **Fundamentally we want students to demonstrate foundational knowledge of critical theories and concepts within the Humanities or Social Sciences depending on the degree sought. Student proficiency in either the Humanities or Social Science is demonstrated through writing with the following benchmarks in mind:**

- "Interdisciplinary grounding" - student selects appropriate disciplines to solve unique problems; concepts are used in accurate but nuanced ways befitting multiple perspectives
- "Integrative leverage" - student calls attention to a novel concept or problem, interpretation, or relationship
- "Critical stance" - student identifies the significance of the integrated stance and ways to reconcile diverse or conflicting views that emerge from interdisciplinary thinking.
- To critically analyze and synthesize information from different kinds of literature and disciplines
- To demonstrate relevant information pertaining to particular areas of focus
- To write effective, grammatically correct, well-organized, scholarly papers
- To demonstrate the ability to read critically a range of scholarly literature in a range of disciplines
- To demonstrate skills to apply knowledge to the particular field of work

To learn more about the graduate Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mhmss/mhmss-degree-information/).

Ethics Minor

Introduction

Please click here (p. 731) to see the Philosophy department information.

Ethical concerns have become a major theme both with respect to our community life and with respect to the professions. Often the demand for more ethics education is met with brief introductory courses or highly specific professional ethics seminars, yet ethics has become such a complex field that a genuine understanding of ethical choices and action requires a more thorough education in both general ethics and professional ethics. In response to the need for better ethics education, the Philosophy Department at the University of Colorado Denver offers a carefully planned program, including courses in the foundation and history of Ethical Theory, as well as in the application of such theories.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

For those students who major in Philosophy and Minor in Ethics, no course can satisfy the requirement for both. For example, if a student takes PHIL 4150: Twentieth Century Ethics, it cannot satisfy the requirement in the major for a course in 19th or 20th-century philosophy.

- Please see or email the departmental advisor: Mark Tanzer (mark.tanzer@ucdenver.edu)
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours approved for the minor.
2. Students must complete a minimum of six upper-division (3000-level and above) PHIL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHIL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. For those students who major in philosophy, up to two courses can satisfy the requirements for both programs.
2. Religious Studies courses cannot be used to fulfill the requirements for the minor.
3. Courses taken at other institutions must either be transferred as a direct equivalent to a CU Denver course or be approved by an advisor in the Philosophy Department for application towards the minor.
4. Courses not specifically listed here but offered by the Department may count toward the degree upon the approval of the Department Undergraduate Advisor.

Code	Title	Hours
Complete the following required course:		*3*
PHIL 1020	Right, Wrong, and Seeing the Difference: Introduction to Ethics	
Complete any four of the following Ethics elective courses:		*12*
PHIL 3030	Philosophies of the Good Life & Happiness	
PHIL 3200	Justice, Freedom, and Power: Social and Political Philosophy	
PHIL 3150	History of Ethics	
PHIL 3250	Business, Society, and Moral Responsibility	
PHIL 3280	War and Morality	
PHIL 3340	Investigating Nature: Introduction to the Philosophy of Science	
PHIL 3430	How to think green: Environmental Ethics	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 3550	Philosophy of Death and Dying	
PHIL 4150	Twentieth Century Ethics	
PHIL 4220	Art, Beauty, and Aesthetic Criticism: Philosophy of Art	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PHIL 4260	Why Obey the Law? Introduction to Philosophy of Law	
PHIL 4600	Questioning Religious Belief and Practice: Introduction to Philosophy of Religion	
Total Hours		**15**

Learning Outcomes for an Ethics minor:

- Recognize and comprehend the salient elements of philosophy's significant historical figures, periods, and areas.
- Understand how philosophical frameworks and theories expand the meanings and implications of existing cultural areas (e.g. those found in science technology, the arts, politics, medicine, and social justice).

More specifically, the above includes training (most typically in writing) about how to:

- Interpret texts by careful reading and synthesis of meanings.
- Identify and criticize philosophical arguments.

- Develop original arguments supported by texts and logical reasoning.
- Outline major philosophical frameworks.

More information about our Ethics minor can be found on our website (https://clas.ucdenver.edu/philosophy/programs/program-minors/).

Philosophy Minor

Introduction

Please click here (p. 731) to see the Philosophy department information.

Philosophy cultivates thoughtful and respectful exchanges about life's most important issues and values. Philosophy provides arguably the best education an undergraduate can receive in careful reasoning, writing, verbal discussion, and debate. These intellectual skills last a lifetime and launch students toward greater self-development, cultural awareness, and the kind of happiness only possible through reflective habits.

Alone and combined with other degrees, philosophy provides indispensable preparation for any professional field.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor, and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see or contact department advisor Mark Tanzer (mark.tanzer@ucdenver.edu) for more information.
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 PHIL credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) PHIL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHIL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. For those students who major in philosophy, up to two courses can satisfy the requirements for both programs.
2. Religious Studies courses cannot be used to fulfill the requirements for the minor.
3. Courses taken at other institutions must either be transferred as a direct equivalent to a CU Denver course or be approved by an advisor in the Philosophy Department for application towards the minor.
4. Courses not specifically listed here but offered by the Department may count toward the degree upon the approval of the Department's Undergraduate Advisor.

Code	Title	Hours
Complete the following required courses:		*9*
PHIL 1012	Truth, Reality, and the Good Life: Introduction to Philosophy	
PHIL 3002	Ancient Greek Philosophy	
PHIL 3022	Knowledge, Perception, and the Search for Objectivity: Modern Philosophy [1]	
Complete six additional PHIL credits, three of which must be at the upper division level (3000 or above).		*6*
Total Hours		**15**

[1] It is recommended but not required that PHIL 3002 Ancient Greek Philosophy be taken before PHIL 3022 Knowledge, Perception, and the Search for Objectivity: Modern Philosophy.

Learning Outcomes for a Philosophy minor:

- Recognize and comprehend the salient elements of philosophy's significant historical figures, periods, and areas.
- Understand how philosophical frameworks and theories expand the meanings and implications of existing cultural areas (e.g. those found in science technology, the arts, politics, medicine, social justice.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/philosophy/programs/program-minors/).

Philosophy of Science Minor

Introduction

Please click here (p. 731) to see the Philosophy department information.

Philosophy of Science concerns the logic of scientific inquiry, raising questions such as:

- What is the best way to use observational evidence to learn about the natural world?
- How can findings be justified as objectively credible reasons to accept a hypothesis or a theory?
- How can we spot biases and procedural errors--and then control them to enhance the quality of investigation?
- What justifies classifying and grouping observational phenomena when the world does not come pre-labeled?
- What criteria should we use when forming hypotheses, and are there 'established' truths we must accept in order to begin hypothesizing?

The scientific method is a creation of human beings --an ongoing project to devise the most logical and rational means to extract information about the natural world. It is that project that is the centerpiece of Philosophy of Science.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see or contact department advisor Mark Tanzer (mark.tanzer@ucdenver.edu) for more information
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 PHIL credit hours.
2. Students must complete a minimum of nine upper-division (3000-level and above) PHIL credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHIL credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. For those students who major in philosophy, up to two courses can satisfy the requirements for both programs.
2. Religious Studies courses cannot be used to fulfill the requirements for the minor.
3. For a particular PHIL 4812 Special Topics in Philosophy/PHIL 4980 Special Topics in Philosophy course to serve as an elective, the course material must be relevant to the minor and advisor approval to use the course as an elective is required.
4. It is possible to use PHIL courses not listed below to fulfill elective requirements but requires advisor approval.
5. Courses taken at other institutions must either be transferred as direct equivalent to a CU Denver course or be approved by an advisor in the Philosophy Department for application towards the minor.
6. Courses not specifically listed here but offered by the Department may count toward the degree upon the approval of the Department Undergraduate Advisor.

Minor Requirements

Code	Title	Hours
Complete the following required courses:		*6*
PHIL 2441	Logic, Language and Scientific Reasoning	
PHIL 3340	Investigating Nature: Introduction to the Philosophy of Science	
or PHIL 4350	Philosophy of Science	
Complete nine additional credit hours from the following list of elective courses:		*9*
PHIL 3032	Twentieth Century Analytic Philosophy	
PHIL 3350	Metaphysics	
PHIL 3360	Epistemology	
PHIL 3430	How to think green: Environmental Ethics	
PHIL 3440	Introduction to Symbolic Logic	
PHIL 3441	Philosophical Reasoning Skills	
PHIL 4101	Pragmatism: Classical American Philosophy	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PHIL 4300	Mind, Body, and Consciousness: Philosophy of Mind	
PHIL 4740	Empiricism	
PHIL 4920	Philosophy of Media and Technology	
Total Hours		**15**

Learning Outcomes for a Philosophy of Science minor:

- Recognize and comprehend the salient elements of philosophy's significant historical figures, periods, and areas.
- Understand how philosophical frameworks and theories expand the meanings and implications of existing cultural areas (e.g. those found in science technology, the arts, politics, medicine, social justice.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/philosophy/programs/program-minors/).

Physics

Chair: Michael "Bodhi" Rogers
Program Assistant: Dawn Arge
Advanced Physics Lab and Prototyping Manager: Kristopher Bunker
Office: North Classroom, 3123
Telephone: 303-315-7390
Email: physics.chair@ucdenver.edu

Undergraduate Information

Physics, as the most fundamental of the sciences, is the foundation upon which many other disciplines are built. Therefore, other programs often require knowledge of the fundamentals of physics, and a physics degree is an outstanding platform for employment and advanced study in many technical disciplines. The department offers both a course of study fulfilling the bachelor of science degree and a wide range of service courses for students majoring in disciplines other than physics. Students intending to major in physics should have a high school background that includes trigonometry, advanced algebra, chemistry and physics, as well as a good preparation in the arts and humanities. Students have an option during their freshman year to overcome any deficiencies in these areas.

The Department of Physics offers a track in Pure and Applied Physics which is intended for students preparing for graduate school, teaching careers, or careers in industry or government labs. Students preparing for employment in an interdisciplinary area (such as environmental, geophysical or, energy study) can choose to add an appropriate minor or arrange a specific major program on an individual basis.

Students majoring in other disciplines have the option of choosing a minor in physics, in astrophysics, or in biophysics.

To enhance the employment and postgraduate study options of physics majors, the department is committed to providing students with opportunities for experimental, computational, and theoretical research. On-campus opportunities are available through the faculty research programs. Questions regarding physics courses or the physics curriculum should be directed to a departmental advisor. Appointments should be made through the physics office.

Departmental Honors

Qualified students are encouraged to participate in the physics honors program. For these students, a physics capstone thesis is required. This work will be conducted under the supervision of a faculty advisor. The topic and scope of this work will be chosen by the student in consultation with the thesis advisor. The student has the option of registering for up to 3 semester hours of directed research or independent study for the thesis project; regardless of registered semester hours, the student must commit the effort of a minimum of 135 hours toward completion of the thesis, which is equivalent to a 3-semester-hour course. The levels of passing scores are satisfactory, meritorious, and excellent.

Within this framework, three levels of honors are awarded by CU Denver in conjunction with the physics major:

1. *Cum laude*: The student must have a cumulative GPA of 3.25 both in physics and overall at the University of Colorado. The student's physics capstone thesis and presentation must be judged to be meritorious by the committee.
2. *Magna cum laude*: The student must have a cumulative GPA of 3.50 both in physics and overall at the University of Colorado. The student's physics capstone thesis and presentation must be judged to be meritorious by the committee.
3. *Summa cum laude*: The student must have a cumulative GPA of 3.75 both in physics and overall at the University of Colorado. The student's physics capstone thesis and presentation must be judged to be excellent by the committee.

Physics Major

Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-pure-applied-physics-option-bs/) to learn about the requirements for the Physics - Pure and Applied Physics BS.

Physics Minors

Click here (p. 764) to learn about the requirements for the Minor in Physics.
Click here (p. 760) to learn about the requirements for the Minor in Astrophysics.
Click here (p. 762) to learn about the requirements for the Minor in Biophysics.

Programs Offered

- Physics, BS (p. 757)
- Astrophysics Minor (p. 760)
- Biophysics Minor (p. 762)
- Physics Minor (p. 764)

Faculty

Professors:

Martin E. Huber, PhD, Stanford University
Michael "Bodhi" Rogers, PhD, RPA, Oregon State University
Alberto C. Sadun, PhD, Massachusetts Institute of Technology

Associate Professor:

Randall P. Tagg, PhD, Massachusetts Institute of Technology

Assistant Professors:

Amy L. Roberts, PhD, University of Notre Dame
Anthony N. Villano, PhD, Rensselaer Polytechnic Institute

Clinical Professor:

Masoud Asadi-Zeydabadi, PhD, University of Colorado Boulder

Clinical Assistant Professor:

Ramesh Dhungana, PhD, University of North Dakota, Grand Forks

Research Professor:

Glen S. Mattioli, PhD, Northwestern University

Research Associate Professor:

Michael J. Friedel, PhD, University of Minnesota

Senior Instructors:

John Carlson, PhD, University of Michigan, Ann Arbor
Julian Gifford, PhD, University of Colorado Boulder

Instructor:

Kiley Spirito, MS, Michigan Technological University

Senior Professional Research Assistant:

Bruce Hines, MS, University of Colorado Denver

Emeritus Professors:

Martin M. Maltempo, PhD, Columbia University
Clyde S. Zaidins, PhD, California Institute of Technology

Physics (PHYS)

PHYS 1052 - General Astronomy I (4 Credits)
The history of astronomy is studied from early civilizations to the present. The basic motions of the earth, moon, sun, and planets are discussed both qualitatively and quantitatively, using elementary principles of physics. Properties of our solar system are discussed in detail, including results from unmanned space probes. Note: An additional 30 hours of laboratory work (at times to be arranged), plus appropriate report preparation time, are required to complete laboratory component of the course. Note: High school algebra or equivalent are strongly recommended preparation for this course. Term offered: spring, fall. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring.

PHYS 1100 - Foundations of Physics (4 Credits)
One-semester non-lab survey course especially designed for non-science majors. Acquaints students with some of the major principles and methods of physics. Includes applications of physics to everyday life and some discussion of the historical development of physics. Note: this course assumes that students have a good working knowledge of elementary algebra. Term offered: spring, summer, fall. Max Hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - No Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Offered irregularly. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

PHYS 1300 - Contemporary Topics in Physics. (2 Credits)
Covers various current topics in physics at a qualitative level. Designed primarily for students intending to major in physics, engineering, and chemistry. Max hours: 2 Credits.
Grading Basis: Letter Grade

PHYS 1450 - Professional Development I (1 Credit)
Introduction to the physics program for all beginning physics majors or those considering the major. Discussions about career opportunities, the various physics undergraduate and graduate degree paths, research being conducted within the physics department, and strategies for being a successful and engaged physics major. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 1840 - Independent Study: PHYS (1-3 Credits)
Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

PHYS 2010 - College Physics I (4 Credits)
This is an algebra based physics course covering mechanics, heat and sound. Note: College algebra and trigonometry are strongly recommended preparation for optimal student success. Term offered: spring, summer, fall. Max Hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2020 - College Physics II (4 Credits)
This is an algebra based physics course covering electricity, magnetism, light and modern physics. Prereq: PHYS 2010 or PHYS 2311 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prerequisite: PHYS 2010 or PHYS 2311 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2311 - General Physics I: Calculus-Based (4 Credits)
This is a calculus based physics course covering vector displacement, uniform and accelerated motion, force, momentum, energy, rotating systems, oscillations, and an introduction to thermodynamics. Emphasis is on basic principles. Prereq: MATH 1401 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 1401 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2321 - Intro Experimental Phys Lab I (1 Credit)
This introductory experimental physics laboratory introduces students to the methods of science through a series of experiments and exercises focused on how objects move. Students working in teams use mathematical and computational approaches to acquire data, examine data, and make conclusions about how well these data support hypotheses and models. Students will use different types of scientific communication, including graphs and other forms of data visualization and cogent written and oral evaluation of experimental findings. Term offered: spring, summer, fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2331 - General Physics II: Calculus-Based (4 Credits)
This is a calculus based physics course covering electrostatics, magnetic fields, electromagnetic waves (including light), and optics. Prereq: PHYS 2311 and MATH 2411 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2311 and MATH 2411 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2341 - Intro Experimental Phys Lab II (1 Credit)
This introductory experimental physics laboratory introduces students to the methods of science through a series of experiments and exercises focused on electricity and magnetism. Students working in teams use mathematical and computational approaches to acquire data, examine data, and make conclusions about how well these data support hypotheses and models. Students will use different types of scientific communication, including graphs and other forms of data visualization and cogent written and oral evaluation of experimental findings. Prereq: PHYS 2321 or PHYS 2030 with a C- or higher. Term offered: spring, summer, fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2321 or PHYS 2030 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2351 - Applied Physics Lab I (1 Credit)
Introduces physics majors to several ways that fundamental concepts in mechanics intersect with useful technologies, resulting in documented technical competencies useful in research and industry. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring.

PHYS 2361 - Applied Physics Lab II (1 Credit)
Introduces physics majors to several ways that fundamental concepts in electrodynamics and optics intersect with useful technologies, resulting in documented technical competencies useful in research and industry. Prereq: PHYS 2351 with a C- or higher. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2351 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Spring.

PHYS 2711 - Vibrations and Waves (3 Credits)
Introduces vibrations and waves associated with physical phenomena. Analytic and numerical methods in physical contexts. Topics include harmonic oscillators, resonance, coupled oscillators, nonlinear oscillators, waves in elastic media, sound waves, pulses and dispersion. Prereq: PHYS 2331 and MATH 2411 with a C- or higher. Term offered: typically offered spring only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2331 and MATH 2411 with a C- or higher.
Typically Offered: Spring.

PHYS 2811 - Modern Physics I (3 Credits)
Presents a study of the events and discoveries that occurred during the latter part of the 19th and the first part of the 20th centuries which led to the discovery of quantum mechanics; namely, special relativity, particle nature of radiation, wave properties of particles, models of the atom, and the introduction of quantum mechanics. Prereq: PHYS 2331 and MATH 2411 with a C- or higher. Term offered: typically offered in spring only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2331 and MATH 2411 with a C- or higher.
Typically Offered: Spring.

PHYS 2840 - Independent Study: PHYS (1-3 Credits)
Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

PHYS 2880 - Directed Research (1-3 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

PHYS 3050 - General Astronomy II (3 Credits)
Evolution of our sun and other stars is studied, as well as the methods used to gain the information. Discussion includes objects such as neutron stars, novae and supernovae, and black holes. Large-scale structures, including clusters and galaxies, are studied. Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311
Typically Offered: Fall.

PHYS 3070 - Physical Cosmology (3 Credits)
Designed for science and engineering maj, stud. in quantitative fields/ w req math skills interested in physical universe. Covers large-scale structure of universe &its evolution from birth well into future.Gravitational concepts, neutron stars, black holes, big bang univ, cosmological tests, dark matter& energy. Problem solving emphasized. Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311 or permission. Note: This course assumes that students have completed PHYS 2010 or PHYS 2311 prior to taking this course. Note: Routine knowledge of algebra, geometry and trigonometry is assumed. Knowledge of trig and calculus also useful. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311
Typically Offered: Spring.

PHYS 3082 - Energy and the Environment (3 Credits)
For students of various backgrounds who wish to increase their understanding of the environmental and technical issues of supplying the energy demands of our society. Alternative energy sources and conservation are explored as solutions to promote sustainable society. Note: One college-level science course and MATH 1110 or equivalent are strongly recommended as preparation for optimal student success. Cross-listed with ENVS 3082. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3120 - Methods of Mathematical Physics (3 Credits)
Typically covers calculus of variations, special functions, partial differential equations, integral transforms, linear vector spaces, and tensor analysis. Prereq: MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher.
Typically Offered: Fall.

PHYS 3151 - Biophysics Outlook I (1 Credit)
Designed as a companion to General Biology I (but can take stand-alone), this course explores how biophysics concepts and experimental methods add to the knowledge of life's processes at the molecular and cellular level. Note: PHYS 2010 and 2020 strongly recommended for optimal student success. Term offered: fall. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3161 - Biophysics Outlook II (1 Credit)
Designed as a companion to General Biology I (but can take stand-alone), this course explores how biophysics concepts and experimental methods contribute to the understanding of the structure and function of plants, animals & ecological systems. Note: PHYS 2010 and PHYS 2020 strongly recommended for optimal student success. Term offered: spring. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHYS 3211 - Analytical Mechanics (4 Credits)
Topics include the Lagrange and Hamiltonian formulations, the two-body problem, rigid body motion, and small oscillations. Prereq: PHYS 2711, MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Coreq: PHYS 3120. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Pre-req: PHYS 2711, MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Co-req PHYS 3120.
Typically Offered: Fall.

PHYS 3251 - Biophysics of the Body (4 Credits)
Fundamental ideas of anatomy, physiology, and biomechanics from the viewpoint of physics. Biological topics covered include: skeletal systems, muscular systems, circulatory systems, and human motion. Analytical mechanics topics include: Newtonian mechanics, harmonic motion, energy conservation, and introductory fluid dynamics. Prereq: PHYS 2711, 3161, MATH 2421 and 3195 or equivalent or permission of instructor. Term offered: infrequent. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2711, 3161, MATH 2421 and 3195

PHYS 3252 - Biophysics of the Body NM (4 Credits)
Fundamental ideas of anatomy, physiology, and biomechanics from the viewpoint of physics. Biological topics covered include: skeletal systems, muscular systems, circulatory systems, and human motion. Analytical mechanics topics include: newtonian mechanics, harmonic motion, energy conservation, and introductory fluid dynamics. Prereq: PHYS 2010 and PHYS 2020. Term offered: infrequently. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2010 and PHYS 2020

PHYS 3411 - Thermal Physics (3 Credits)
Covers the basic concepts of the three related disciplines of thermodynamics, statistical mechanics, and kinetic theory. Prereq: PHYS 2331, PHYS 2811 and MATH 2421 with a C- or higher; Prereq or Coreq: MATH 3195 or MATH 3191 and MATH 3200 with a C- or higher if completed prior to PHYS 3411. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Prereq: PHYS 2331, 2811 and MATH 2421 with a C- or higher; Pre or Coreq: MATH 3195 or (MATH 3191 and MATH 3200) with a C- or higher.
Typically Offered: Spring.

PHYS 3450 - Professional Development II (1 Credit)
Continuation of professional preparation for careers and graduate school. Students will conduct career-related research and engage in classroom discussions. Students will also examine their resume and transcript to create individualize action plans to bridge the gap between their current skills and those desired by employers and graduate schools. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3451 - Biophysics of the Cell (4 Credits)
Fundamentals of cellular biology from the viewpoint of physics. Biological topics covered include: the central dogma of molecular biology, cellular signaling, genetic regulation, molecular crowding, and ion channels. Statistical and thermal physics topics include: statistics, probability, thermodynamics, heat, and entropy. Prereq: PHYS 2811, 3151 and MATH 2421 or permission of instructor. Coreq: MATH 3195. Term offered: on demand. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2811, 3151 and MATH 2421 Coreq: MATH 3195

PHYS 3452 - Biophysics of the Cell NM (4 Credits)
Fundamentals of cellular biology from the viewpoint of physics. Biological topics covered include: the central dogma of molecular biology, cellular signaling, genetic regulation, molecular crowding, and ion channels. Statistical and thermal physics topics include: statistics, probability, thermodynamics, heat, and entropy. Prereq: PHYS 2020, 2040 and 3151 or permission of instructor. Term offered: infrequent. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020, 2040 and 3151

PHYS 3620 - Sound and Music (3 Credits)
Considers the basic nature of sound waves, the ear and hearing, and musical instruments. Although this course is mainly descriptive, some high school algebra will be used. Term offered: typically offered fall only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3711 - Advanced Experimental Physics Laboratory (2 Credits)
An advanced lab in which students select and explore the ideas and laboratory methods of major professional areas of physics: classical mechanics & nonlinear dynamics, electrodynamics, thermal physics, fundamental quantum behavior, nuclear and elementary particle physics, atomic and molecular physics, optics and photonics, condensed matter physics, fluid dynamics, acoustics, plasma physics, and astrophysics as well as interdisciplinary topics. Note: Must be taken twice by students majoring in physics. Prereq: PHYS 2711 or 2811 with a C- or higher or permission of instructor. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better.
Typically Offered: Fall, Spring.

PHYS 3751 - Physics Capstone Proposal (1 Credit)
Provides opportunity for physics majors to prepare a written proposal in preparation for senior thesis research or a senior project. Emphasis placed on describing the problem, methodology, equipment, and data analysis needed to successfully complete the research or project. Completed proposals are submitted to each student's potential research or project advisor for review and approval. Note: Required for all students majoring in physics. Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better.
Typically Offered: Fall, Spring.

PHYS 3840 - Independent Study: PHYS (1-3 Credits)
Note: Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PHYS 3880 - Directed Research (1-3 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher and at least a 2.75 cumulative GPA. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

PHYS 4211 - Quantum Mechanics (3 Credits)
A course in which both wave and matrix mechanics are developed and applied to selected problems in atomic physics. Prereq: PHYS 2811 and 3211 with a C- or higher. Co-req: PHYS 4212. Term Typically Offered: Fall. Cross-listed with PHYS 5211. Max hours: 3 credits
Grading Basis: Letter Grade
Prereq: PHYS 2811 and 3211 with a C- or higher. Coreq: PHYS 4212.
Typically Offered: Fall.

PHYS 4212 - Quantum Mechanics Seminar (1 Credit)
This course involves supplemental discussion and guided extension of course content presented in PHYS4211 Quantum Mechanics through the use of one or more of the following: Interactive Tutorials, Collaborative Problem Solving, Computation, and Hands-on Activities. Co-req: PHYS 4211. Term Typically Offered: Fall. Max hours: 3 credits
Grading Basis: Letter Grade
Co-req: PHYS 4211
Typically Offered: Fall.

PHYS 4251 - Physical Fluid Dynamics (3 Credits)
Fundamental concepts and methods in fluid dynamics are developed through basic laws, the Navier-Stokes equation, viscous fluid flow, dimensional analysis, vorticity, boundary layers, linear stability and turbulent flow. Cross-listed with PHYS 5251. Prereq: Restricted to students who have completed PHYS 2311, PHYS 2331 and PHYS 3120 with a C- or higher or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to students who have completed PHYS 2311, PHYS 2331 and PHYS 3120 with a C- or higher or with instructor permission.

PHYS 4311 - Electricity & Magnetism (3 Credits)
Elements of mathematical theory of electricity and magnetism, including electrostatics, magnetostatics, polarized media, direct and alternating current theory, and introduction to electromagnetic fields and waves. Pre-req: PHYS 2331 and PHYS 3120 with a C- or higher. Co-req: PHYS 4312. Term Typically Offered: Spring. Cross-listed with PHYS 5311. Max hours: 3 credits.
Grading Basis: Letter Grade
Pre-req: PHYS 2331 and PHYS 3120 with a C- or higher. Co-req: PHYS 4312.
Typically Offered: Spring.

PHYS 4312 - Electricity & Magnetism Seminar (1 Credit)
This course involves supplemental discussion and guided extension of course content presented in PHYS 4311 Electricity& Magnetism through the use of one or more of the following: Interactive Tutorials, Collaborative Problem Solving, Computation, and Hands-on Activities. Co-req: PHYS 4311. Term Typically Offered: Spring. Max hours: 1 credit
Grading Basis: Letter Grade
Co-req of PHYS 4311
Typically Offered: Spring.

PHYS 4351 - Bioelectromagnetism (4 Credits)
The fundamental theory of electric and magnetic fields is developed and applied to problems of biology and medicine. Examples in medical diagnostics and treatment are built upon rigorous application of Maxwell's equations and constitutive models of electromagnetic properties of biomaterials. Prereq: PHYS 2331 and 3120 or permission of instructor. Cross-listed with PHYS 5351. Term offered: spring infrequently. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331 and 3120
Typically Offered: Spring.

PHYS 4352 - Bioelectromagnetism NM (4 Credits)
This course is the non-majors' companion to PHYS 4351/5351 (taught simultaneously) using modeling approaches accessible to the general science student. Prereq: PHYS 2010, 2020 and MATH 1401 or permission of instructor. Cross-listed with PHYS 5352. Term offered: spring. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2010, 2020 and MATH 1401
Typically Offered: Spring.

PHYS 4400 - Scientific Instrumentation (3 Credits)
Conceptual and practical knowledge needed to design scientific instruments, develop technical products, and use special laboratory procedures to research. Topics include materials, mechanisms, electronics, and optics. Note: Two semesters of 2000-level introductory physics strongly recommended for optimal student success. Cross-listed with PHYS 5400. Repeatable. Term offered: infrequent. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHYS 4401 - Special Topics (1-3 Credits)
Repeatable.Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 4450 - Professional Development III (1 Credit)
Continuation of professional preparation for careers and graduate school. This seminar provides opportunities for students to reflect upon connections between the physics major, the core curriculum, and other learning experiences while a student. Students will develop a written reflection on their undergraduate experiences. Students will also learn how to locate and apply to open job positions and graduate school programs. Prereq: PHYS 3450 with a C- or higher. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 3450 with a C- or higher.
Typically Offered: Fall.

PHYS 4510 - Optics (3 Credits)
Presents a contemporary treatment of selected topics in optics, such as matrix methods in geometrical optics, the Fourier analysis approach to physical optics, and interaction of light with matter. Prereq: PHYS 2331, 2811 and 3120 with a C- or higher. Infrequently Offered. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331, 2811 and 3120 with a C- or higher.
Typically Offered: Spring.

PHYS 4550 - Astrophysics (3 Credits)
Covers stellar astrophysics, solar physics, star formations, stellar evolution, processes in the interstellar medium, galactic dynamics and evolution, formation of galaxies and cosmology. Note: MATH 3195; PHYS 2821 and 3050 are strongly recommended preparation for optimal student success. Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4611 - Computational Physics (3 Credits)
Designed to provide an understanding of the role of the computer in modern theoretical physics by studying the simulation of physical phenomena in various fields of physics. Prereq: PHYS 3120. Note: Students will not earn credit for PHYS 4611, if they have already earned credit for PHYS 4610. Infrequently Offered. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 3120

PHYS 4620 - Computational Physics II (2 Credits)
Assigns the student to an individual, advanced-level project modeling a physical phenomenon on the computer. Prereq: PHYS 4611 with a C- or higher. Infrequently Offered. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 4611 with a C- or higher.

PHYS 4650 - Solid State Physics (3 Credits)
Covers the basic thermal and electrical properties of solids which are explained in terms of the Brillouin zone structures of phonons and electrons. Prereq: PHYS 3411 and PHYS 3811 with a C- or higher. Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3411 and PHYS 3811 with a C- or higher.

PHYS 4678 - Quantum Computing (3 Credits)
The course teaches students the principles, the algorithms and the programming methods of quantum computing, and also discusses the associated physics and mathematics background required. Other related topics such as quantum communication and quantum entanglement will also be discussed. Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher. Term Typically Offered: Spring. Cross-listed with PHYS 5678, ELEC 4678, and ELEC 5678. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher.
Typically Offered: Spring.

PHYS 4679 - Quantum Computing Algorithms (3 Credits)
The course discusses several seminal quantum algorithms, including the quantum Fourier transforms, Grover's and Shor's algorithms, followed by explaining several advanced quantum computing algorithms, including quantum error correction, sparse linear systems , and variational eigensolver. Google Cirq quantum programming library will be used for actual quantum programming implementations of the algorithms discussed. Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher. Cross-listed with PHYS 5679, ELEC 4679, and ELEC 5679. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher.
Typically Offered: Fall.

PHYS 4680 - Quantum Computing Technology (3 Credits)
Students will explore some of the concepts and experimental practices for realizing quantum computers. They will engage in laboratory practice of relevant skills including high-performance analog electronics; optics-based quantum encryption and eraser implementations; RF electronics; and vacuum and cryogenic techniques. Prereq: PHYS 4711 with a C- or higher. Cross-listed with PHYS 5680, ELEC 4680, and ELEC 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 4711 with a C- or higher.

PHYS 4681 - Quantum Technology Systems (3 Credits)
Students will explore a systems approach toward experimental practices for realizing quantum information science and engineering (QISE), with a focus on vacuum and cryogenic techniques and integration of electronics subsystems into a "dry" cryostat. They will engage in laboratory practice of relevant skills including creation and measurement of high vacuum, methods for reaching ultra-low temperatures, concerns in the design and construction of cryogenic apparatuses, and operation of a "dry" cryogenic system at 4 K, including measurements on superconducting quantum interference devices. Cross-listed with PHYS 5681, ELEC 4681 and ELEC 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4711 - Physics Capstone Project (2 Credits)
A one-semester intensive physics capstone project in experimental or computational physics. Projects may include (A) development of a new or enhanced experiment for PHYS 3711, (B) further independent investigation in one of the fundamental areas of physics, or (C) development of a technical innovation for society and industry. Prereq: PHYS 3751 with a C- or higher or permission of instructor. Term offered: spring, fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3751 with a C- or higher.
Typically Offered: Fall, Spring.

PHYS 4751 - Physics Capstone Thesis (1 Credit)
A two semester capstone experience in which students prepare, summarize, present their own research in physics in a formal written thesis. Must be taken twice by physics majors who choose this option. Students must also complete a minimum of 135 hours of research through completion of 3 credits of PHYS 4880 Directed Research or a research internship or other documented evidence of research efforts. Prereq: PHYS 3751 with a C- or higher or permission of instructor. Repeatable. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PHYS 3751 with a C- or higher.
Typically Offered: Fall, Spring.

PHYS 4810 - Atomic and Molecular Structure (3 Credits)
A course in which quantum mechanical methods are applied to problems in atomic and molecular physics, such as the one-electron atom, atomic and molecular spectra, and particle scattering. Prereq: PHYS 3811 with a C- or higher. Infrequently Offered. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3811 with a C- or higher.

PHYS 4820 - Subatomic Physics (3 Credits)
Introductory treatment of the various concepts and models used to describe nuclear and high energy particle phenomena. Prereq: PHYS 2811 with a C- or higher. Term offered: spring, infrequent. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2811 with a C- or higher.
Typically Offered: Spring.

PHYS 4840 - Independent Study: PHYS (1-3 Credits)
Note: Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PHYS 4850 - Physics for Design and Innovation I (3 Credits)
A service-learning project using fundamental physical principles to design a prototype scientific instrument, technical device, or technical process for a real-world client. Includes instruction on project management, intellectual property, and market analysis. Cross-listed with PHYS 5850. Repeatable. Term offered: infrequent. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHYS 4852 - Physics for Design and Innovation II (3 Credits)
A capstone project using fundamental physical principles to prototype a scientific instrument, technical device or technical process. The focus is on the student's own product idea. Includes online guided readings on the wider context of product development. Students should consult with instructor on necessary physics and mathematics preparation for the project. Prereq: PHYS 4850 with a grade of C- or higher. Cross-listed with PHYS 5852. Repeatable. Term offered: infrequent. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PHYS 4850 with a C- or higher.

PHYS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Term offered: spring, summer, fall. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PHYS 4920 - Advanced Undergraduate Seminar (1 Credit)
Studies a focused topic such as: size and age of the universe, critical phenomena, non-linear optics, energy, fiber-optic communications, among others. Students research these topics and give a seminar outlining their findings. Prereq: PHYS 2811 with a C- or higher. Infrequently Offered. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2811 with a C- or higher.

PHYS 4921 - Senior Seminar (1 Credit)
Grading Basis: Letter Grade

PHYS 4939 - Internship (1-3 Credits)
Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Term offered: spring, summer, fall infrequently. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

PHYS 4950 - General Relativity (3 Credits)
This course will introduce classical general relativity, a generalized theory of gravity that reduces to Newtonian gravity is the weak gravity limit. This course covers the basic principles of Einstein's general theory of relativity, differential geometry, experimental tests of general relativity, black holes, and cosmology. Since this course will emphasize both analytic calculation and physical understanding of classical gravity and is a 3 credit hour senior-level physics course, it can be very challenging, especially if taken with other physics courses. A good rule of thumb for a college course of this type is to expect to spend a minimum of 2 to 4 times the amount of time outside of class as you do in class. For this course, that means a minimum of 6 to 12 hours per week outside of class. Term offered: infrequent. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4980 - Advanced Physics Topics (1-3 Credits)
Covers a particular topic, as announced in the 'Schedule Planner.' Note: May be taken more than once for credit in different topics. Prereq: PHYS 2811 with a C- or higher. Repeatable. Term offered: spring, fall. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: PHYS 2811 with a C- or higher.
Typically Offered: Fall, Spring.

Physics, BS

Introduction

Please click here (p. 749) to see Physics department information.

The department of Physics at the University of Colorado Denver enriches understanding of how the world works by incorporating physics in every aspect of life. Good intuition about how things work has been, since the time of Galileo, a hallmark of physicists.

CU Denver's faculty is committed to providing substantive applied research experiences for our undergraduate students by incorporating aspects of every day life into their classrooms and research. A major in physics is one of the few academic degree programs that prepares its students for an amazing array of careers including computer analyst, engineer, technical writer, industrial marketer, doctor, and lawyer.

Our faculty is committed to provide students with opportunities for laboratory experience in a research environment. Students work elbow-to-elbow with their professor mentors on such projects as:

- Applying chaos and complex systems theory to problems ranging from the onset of turbulence in fluid flows to the erratic motions of loads hanging from cranes aboard ships at sea
- Study of quasar jets and other associated dynamical properties, supernovae and nucleosynthesis
- Superconducting Quantum Interference Devices (SQUIDs) specifically the fabrication of microelectronic SQUIDs
- Applying non-linear dynamics and stochastic modeling to biological systems to understand how variations in genotype can lead to unique behavior
- Developing detection techniques in the search for the Dark Matter component of our Universe
- Applying physics to archaeology and historic preservation
- Developing ways to help students learn physics better

Those students intending to major in physics should have a high school background that includes trigonometry, advanced algebra, chemistry and physics, as well as a good preparation in the arts and humanities. Students have an option during their freshman year to overcome some deficiencies in these areas. Students preparing for employment in an interdisciplinary area (such as environmental, geophysical or energy study) can choose to add an appropriate minor or arrange a specific major program on an individual basis. Students interested in teaching physics in high school are encouraged to consider the CLAS educational studies minor in addition to their physics major.

Students are strongly encouraged to consult with the Physics advisor, meet physics faculty engaged in research, attend departmental seminars, and explore ways that Physics relates to research undertaken by faculty in other disciplines.

For more information, contact:

Michael "Bodhi" Rogers (Physics advisor)
Email: physics.chair@ucdenver.edu
Office: North Classroom 3123B

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.
- Students pursuing the 4+1 track must apply and be accepted for participation in the BS/MIS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-bs/BMA_form_1_1_.pdf) to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Students must apply and be accepted to the Integrated Sciences, MIS during the last semester of their undergraduate career. A maximum of 12 credit hours of graduate level courses that are applied to the undergraduate degree will apply to the graduate degree.
- If you are planning on teaching after graduation, the College of Liberal Arts and Sciences (CLAS) has partnered with the School of Education & Human Development (SEHD) to enable CU Denver undergraduates to get a jumpstart on their teaching careers. When you join the minor in Teacher

Education, you gain access to a 4+1 program that helps you earn your CLAS degree, a Master's in Teaching, and would qualify for a Colorado Teaching License in five years. Click here (p. 634) for more information.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 61 credits, including a minimum of 39 PHYS credit hours and a minimum of 16 credit hours in ancillary coursework.
2. Students must complete a minimum of 16 PHYS upper-division (3000-level and above) credit hours in the major.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 12 PHYS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must declare their intention to major in Physics by the time they have completed 60 semester hours.
2. Students pursuing the 4+1 track must apply and be accepted for participation in the BS/MIS program prior to completion of the BS degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/physics-bs/BMA_form_1_1_.pdf) to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
    a. A maximum of 12 credit hours of graduate level courses that are applied to the undergraduate degree will apply to the graduate degree. Students must also earn a B- or higher in graduate level coursework, for it to apply to the Integrated Science, MIS.
3. The introductory labs, PHYS 2351 Applied Physics Lab I and PHYS 2361 Applied Physics Lab II, are required for all physics majors. If the department is unable to offer one or both of these labs then PHYS 2321 Intro Experimental Phys Lab I may be substituted for PHYS 2351 Applied Physics Lab I and PHYS 2341 Intro Experimental Phys Lab II may be substituted for PHYS 2361 Applied Physics Lab II, upon prior advisor approval.
4. Students earning a Physics major cannot earn a Physics minor.
5. All physics majors must complete a capstone thesis or capstone project. Writing and defending a thesis is required for all students wishing to graduate with departmental honors.
6. The physics faculty also encourage all physics majors to enroll in PHYS 1450, 3450, and 4450 Professional Development I, II, and III seminar courses.

Code	Title	Hours
Complete all of the following required courses:		*30*
PHYS 2311	General Physics I: Calculus-Based	
PHYS 2351	Applied Physics Lab I	
PHYS 2331	General Physics II: Calculus-Based	
PHYS 2361	Applied Physics Lab II	
PHYS 2711	Vibrations and Waves	
PHYS 2811	Modern Physics I	
PHYS 3120	Methods of Mathematical Physics	
PHYS 3211	Analytical Mechanics	

PHYS 3411	Thermal Physics	
PHYS 3711	Advanced Experimental Physics Laboratory (must be taken twice for a total of four credit hours)	
Complete courses for one of the following tracks:		*12-14*
Students following the Pure and Applied Physics track complete a minimum of 14 credit hours from the following courses:		
PHYS 4211	Quantum Mechanics	
PHYS 4212	Quantum Mechanics Seminar	
PHYS 4311	Electricity & Magnetism	
PHYS 4312	Electricity & Magnetism Seminar	
Complete a minimum of six 3000-level or above PHYS credit hours (maximum of up to three semester hours of directed research or independent study can count towards this requirement). [2]		
Students following the Physics, BS 4+1, Masters of Integrated Science track complete 12 credit hours from the following courses. These courses will also apply to the MIS:		
MINS 5200	Research Methods in Interdisciplinary Science	
PHYS 5211	Quantum Mechanics	
PHYS 5311	Electricity & Magnetism	
One graduate level STEM (MATH, PHYS, ELEC, BIOL, etc.) course chosen to meet the student's MIS Program Goals, in consultation with the MIS Program Director.		
Complete one of the following options:		*3*
Option 1		
PHYS 3751	Physics Capstone Proposal	
PHYS 4751	Physics Capstone Thesis (must take twice and complete two credit hours) [1]	
Option 2		
PHYS 3751	Physics Capstone Proposal	
PHYS 4711	Physics Capstone Project	
Complete all of the following required ancillary courses:		*16-18*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3191 & MATH 3200	Applied Linear Algebra and Elementary Differential Equations	
or MATH 3195	Linear Algebra and Differential Equations	
Total Hours		**61-65**

1 PHYS 4751 Physics Capstone Thesis must be taken twice by physics majors who must also complete a minimum of 135 hours of research through completion of three credits of PHYS 4880 Directed Research or a research internship or other documented evidence of research efforts.

2 Electives with a prefix other than PHYS may be considered in consultation with your departmental academic advisor and with approval of the physics department chair.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/physics/academics/program-learning-goals/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Astrophysics Minor

Introduction

Please click here (p. 749) to see Physics department information.

Astrophysics is an important and well-represented subdiscipline of physics. It includes the study of the solar system, galactic and extragalactic astrophysics, as well as cosmology. A minor in this field combines a theoretical approach with observational analysis. There is also the opportunity to do research in this field.

The physics department offers minors in physics, biophysics, and astrophysics. However, it is not possible to receive a minor in more than one of these fields. Also, physics majors may elect to receive the astrophysics or biophysics minor from the department, but not the physics minor.

Students are strongly encouraged to consult with the astrophysics advisor, meet physics faculty engaged in Astrophysics research, attend departmental astrophysics-related seminars, and explore ways that astrophysics relates to research undertaken by faculty in other disciplines.

For more information, contact:

Alberto Sadun (Astrophysics Minor Advisor)
Email: alberto.sadun@ucdenver.edu
Office: North Classroom 3809

Michael "Bodhi" Rogers (Physics advisor)
Email: physics.chair@ucdenver.edu
Office: North Classroom 3123B

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 16 PHYS credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHYS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Requirements for the minor in astrophysics may be used to fulfill the requirements of the major in physics.
2. A student majoring in physics who wants to minor in astrophysics cannot use the 3000-level and above courses applied to the Astrophysics minor for their Physics Major requirements.
3. A student seeking a minor in astrophysics who also wants to minor in physics or biophysics can only use one of the 3000-level and above courses applied to the Astrophysics minor for their Physics Minor or Biophysics Minor requirements.

Code	Title	Hours
Complete the following Introductory Physics Lecture/Lab Courses:		*10*
PHYS 2010	College Physics I	
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
or PHYS 2351	Applied Physics Lab I	
PHYS 2020	College Physics II	
or PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
or PHYS 2361	Applied Physics Lab II	
Complete a minimum of six credit hours from the following Upper Division Astrophysics Elective credit [1]		*6*
PHYS 3050	General Astronomy II	
PHYS 3070	Physical Cosmology	
PHYS 3082	Energy and the Environment	
PHYS 3411	Thermal Physics	
PHYS 3840	Independent Study: PHYS [2]	
PHYS 3880	Directed Research [2]	
PHYS 3939	Internship [2]	
PHYS 4510	Optics	
PHYS 4550	Astrophysics	
PHYS 4840	Independent Study: PHYS [2]	
PHYS 4980	Advanced Physics Topics [2]	
Total Hours		**16**

1 Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours. Additional astrophysics-related special topics or elective courses may be approved by the department advisor. Electives with a prefix other than PHYS may be considered in consultation with your departmental academic advisor and with approval of the physics department chair.

2 Topics in these classes vary, as do the number of credits that can be earned. See departmental advisor for approval.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/physics/academics/program-learning-goals/).

Biophysics Minor

Introduction

Please click here (p. 749) to see Physics department information.

The minor in biophysics enables students with primary interests in biology, chemistry, health sciences, mathematics, anthropology, psychology, or other disciplines to explore the deep connections between fundamental physical processes and the functions and development of life. Using mathematical and computational models as well as precise experimental measurements and advanced instrumentation, biophysics explores living processes within a framework that builds upon fundamental physics concepts of mechanics, electrodynamics, statistical physics, and quantum physics. Students taking a minor in biophysics will be able to synthesize some or all of these areas of physics at a mature level of understanding into their primary field(s) of study, bringing an enriched array of intellectual and experimental tools to the pursuit of their professional goals.

Students must consult with the physics advisor, meet physics faculty engaged in biophysics research, attend departmental biophysics-related seminars, and explore ways that biophysics relates to research undertaken by faculty in other disciplines - including both fundamental science and clinical medicine. Opportunities also arise to connect biophysics studies to outreach into regional high schools so that pre-college students can benefit from undergraduates sharing their experiences with connecting studies across disciplines.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

For more information, contact:

Masoud Asadi-Zeydabadi (Biophysics Minor Advisor)
Email: masoud.asadi-zeydabadi@ucdenver.edu
Office: North Classroom 3803

Michael "Bodhi" Rogers (Physics advisor)
Email: physics.chair@ucdenver.edu
Office: North Classroom 3123B

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 16 PHYS credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHYS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Requirements for the minor in biophysics may be used to fulfill the requirements of the major in physics.
2. A student majoring in physics who wants to minor in biophysics cannot use the 3000-level and above courses for the Biophysics minor for their Physics Major requirements.

3. A student seeking a minor in biophysics who also wants to minor in physics or astrophysics can only use one of the 3000-level and above courses applied to the Biophysics minor for their Physics Minor or Astrophysics Minor requirements.
4. Additional biophysics-related special topics or elective courses may be approved by the department advisor. Such courses include topics such as Radiation Physics in Biomedicine, Computational Modeling in Biophysics, Nonlinear Dynamics in Biomedicine, and specialized courses in biophysics-related instrumentation. Electives with a prefix other than PHYS may be considered in consultation with your departmental academic advisor and with approval of the physics department chair.

Code	Title	Hours
Complete the following Introductory Physics Lecture/Lab Courses:		*10*
PHYS 2010	College Physics I	
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
or PHYS 2351	Applied Physics Lab I	
PHYS 2020	College Physics II	
or PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
or PHYS 2361	Applied Physics Lab II	
Complete the following Upper Division Biophysics Courses:		*2*
PHYS 3151	Biophysics Outlook I	
PHYS 3161	Biophysics Outlook II	
Complete a minimum of four credit hours from the following Upper Division Biophysics Elective Courses:		*4*
PHYS 3251	Biophysics of the Body	
PHYS 3252	Biophysics of the Body NM	
PHYS 3451	Biophysics of the Cell [2]	
or PHYS 3452	Biophysics of the Cell NM	
PHYS 3840	Independent Study: PHYS [3]	
PHYS 3880	Directed Research [3]	
PHYS 4351	Bioelectromagnetism [2]	
or PHYS 4352	Bioelectromagnetism NM	
PHYS 4840	Independent Study: PHYS [4]	
PHYS 4880	Directed Research [3]	
Total Hours		**16**

1 Need a minimum of four credits to satisfy the requirement that students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours.

2 The courses containing "NM" are versions whose math and use of prior physics knowledge has been adjusted - in terms of grading and assignments - for students who have taken fewer math and physics courses than physics majors (NM stands for non-majors). Both versions are meant to be content rich and conceptually challenging, still require quantitative modeling, and are offered simultaneous by the same instructor. Students with strong math backgrounds are encouraged to take the "majors" (xx51) version. Either one or the other version can count toward the minor, but not both.

3 Repeatable. Max Credits: six.

4 Repeatable. Max Credits: 12.

To learn more about the Student Learning Outcomes for this program, please visit our website.

Physics Minor

Introduction

Please click here (p. 749) to see Physics department information.

The department of Physics at the University of Colorado Denver enriches understanding of how the world works by incorporating physics in every aspect of life. Good intuition about how things work has been, since the time of Galileo, a hallmark of physicists.

CU Denver's faculty is committed to providing substantive applied research experiences for our undergraduate students by incorporating aspects of every day life into their classrooms and research. A major in physics is one of the few academic degree programs that prepares its students for an amazing array of careers including computer analyst, engineer, technical writer, industrial marketer, doctor, and lawyer.

Our faculty is committed to provide students with opportunities for laboratory experience in a research environment. Students work elbow-to-elbow with their professor mentors on such projects as:

- Applying chaos and complex systems theory to problems ranging from the onset of turbulence in fluid flows to the erratic motions of loads hanging from cranes aboard ships at sea
- Study of quasar jets and other associated dynamical properties, supernovae and nucleosynthesis
- Superconducting Quantum Interference Devices (SQUIDs) specifically the fabrication of microelectronic SQUIDs
- Applying non-linear dynamics and stochastic modeling to biological systems to understand how variations in genotype can lead to unique behavior
- Developing detection techniques in the search for the Dark Matter component of our Universe
- Applying physics to archaeology and historic preservation
- Developing ways to help students learn physics better

Students are strongly encouraged to consult with the Physics advisor, meet physics faculty engaged in Pure & Applied Physics research, attend departmental seminars, and explore ways that Physics relates to research undertaken by faculty in other disciplines.

For more information, contact:

Michael "Bodhi" Rogers (Physics advisor)
Email: physics.chair@ucdenver.edu
Office: North Classroom 3123B

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 16 PHYS credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.

4. Students must complete a minimum of nine PHYS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. A student majoring in physics cannot earn a minor in physics.
2. A student seeking a minor in physics who also wants to minor in astrophysics or biophysics can only use one of the 3000-level and above courses applied to the Physics minor for their Astrophysics Minor or Biophysics Minor requirements.

Physics Minor Requirements

Code	Title	Hours
Complete the following Introductory Physics Lecture/Lab courses:		**10**
PHYS 2010	College Physics I	
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
or PHYS 2351	Applied Physics Lab I	
PHYS 2020	College Physics II	
or PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
or PHYS 2361	Applied Physics Lab II	
Complete six upper division (3000-level or higher) PHYS elective credit hours.		**6**
Total Hours		**16**

Note

Electives with a prefix other than PHYS may be considered in consultation with your departmental academic advisor and with approval of the physics department chair.

To learn more about the Student Learning Outcomes for this program, please visit our website.

Political Science

Chair: Michael Berry
Business Services Professional: Angela Schmitt
Undergraduate Advisor: Karen Breslin
Pre-law Advisor: Glenn Morris
Graduate Advisor: Michael Berry
Director, New Directions Program: Steve DelCastillo
Office: Student Commons, Room 3212
Telephone: 303-315-1770
Fax: 303-315-1780

Overview

Political science is the study of people, power and the public good. Looking at a variety of societies, institutions and interpersonal situations, the discipline asks who has power, where this power comes from, how it is used, how it promotes or impairs the public good and how the public good is defined. Political science draws from other fields, such as psychology, philosophy, economics, sociology and world literature. Finally, it explores the relationship between idealism and realism, between theory and practice, between political thought and personal action.

Opportunities for students with a BA in political science include careers in business, teaching, journalism, community organizing and government service. A political science degree also serves as good preparation for professional training in law and public administration. Students' internship experiences increase their job opportunities. Students with an MA in political science may find careers in such areas as business, government research and administration and teaching at the community college level.

Please visit the Political Science Department website for detailed information on programs, faculty, students, courses and syllabi, community involvement and service learning, internships and photographs.

Undergraduate Information

Click here (p. 776) to learn about the requirements for the Major in Political Science.
Click here (p. 779) to learn about the requirements for the Major in Political Science-Public Policy Option.
Click here (p. 789) to learn about the requirements for the Minor in Political Science.
Click here (p. 791) to learn about the requirements for the International Politics and Foreign Policy Undergraduate Certificate.
Click here (p. 795) to learn about the requirements for the Middle Eastern Politics Undergraduate Certificate.
Click here (p. 794) to learn about the requirements for the Labor Leadership Undergraduate Certificate.
Click here (p. 797) to learn about the Public, Non-Profit and Community Leadership Undergraduate Certificate.
Click here (p. 787) to learn about the 4+1 BA to MA program.

Departmental Honors

Requirements for honors in political science are an overall GPA (in all courses, not just political science courses) of 3.65 or better and the preparation and defense of an honors paper of 25 to 35 pages in length. Honors candidates with an overall GPA of 3.75 to 3.84 may graduate with high honors, and those with GPAs of 3.85 and higher may graduate with highest honors. However, the level of honors granted depends on both the GPA and the quality of the honors paper. The honors paper is usually completed during the semester in which a student is graduating. The student must defend the thesis before political science faculty no later than the first Friday in December or the first Friday in May. Interested students should identify a thesis topic and a faculty sponsor and submit an application to participate in the program by October 1 for May graduates and April 1 for December graduates. For details, please contact Karen Breslin, the department undergraduate advisor, karen.breslin@ucdenver.edu

Fourth World Center for the Study of Indigenous Law and Politics

Executive Director: Glenn T. Morris
Telephone: 303-315-1762
This center provides a research clearinghouse to students and faculty at CU Denver on legal and political issues that affect indigenous peoples (the Fourth World). In addition to supporting a modest library of rare books and periodicals on indigenous issues, the center also stocks video and audio resources on subjects of indigenous politics and a substantial news file archive on current developments in the Fourth World. The center has produced curricular materials, including the Fourth World Bulletin, for use in international relations and area-studies courses.

Center for New Directions in Politics and Public Policy

Director: Steve DelCastillo
This center provides academic programs, courses and research focused in the areas of politics and public policy with the purpose of developing the leadership capacities necessary to address changing public priorities for the 21st century within neighborhoods, communities, governmental jurisdictions, labor organizations, and nonprofit entities. Students in the Center's academic programs include working professionals in public and non-profit sectors; elected officials; community activists; interest-group stakeholders; educators from a wide range of demographic, occupational, and personal backgrounds; and simply concerned citizens. The New Directions program offers professional internships with a wide variety of political jurisdictions, community-based groups, and labor organizations across Colorado, including several funded internships.

The center offers both undergraduate and graduate degrees in political science with emphases in public policy and administration.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/political-science/) catalog to read about our graduate programs.

Programs Offered

- Political Science, BA (p. 776)
- Political Science - Politics and Public Policy Option, BA (p. 779)
- Political Science, BA with Secondary Teaching Licensure Endorsement (p. 783)
- Political Science, 4 + 1 BA/ MA (p. 787)
- Political Science Minor (p. 789)
- International Politics and Foreign Policy Undergraduate Certificate (p. 791)
- Labor Leadership Undergraduate Certificate (p. 794)
- Middle Eastern Politics Undergraduate Certificate (p. 795)

- Public, Non-Profit and Community Leadership Undergraduate Certificate (p. 797)

Professors:

Christoph Stefes, PhD, Denver University

Associate Professors:

Michael J. Berry, PhD, University of Colorado
Sasha Breger-Bush, PhD, University of Denver
Bassem Hassan, PhD, University of Denver
Betcy Jose, PhD, University of Pittsburgh
Glenn T. Morris, JD, Harvard University School of Law
Tony Robinson, PhD, University of California, Berkeley
Thorsten Spehn, PhD, University of Denver
James Walsh, PhD, University of Colorado

Assistant Professors:

Karen Breslin, JD, University of Denver

Senior Instructors:

Harvey Bishop, MA, University of Colorado

Adjunct Faculty:

Charles Norton, JD, University of Chicago
Nicholas Rockwell, PhD, University of California, Los Angeles
Karen Sugar, M.A., University of Colorado
Martin Widzer, PhD, University of Denver

Emeritus Faculty:

Mike Cummings, PhD, Stanford University
Joel Edelstein, PhD, University of California, Riverside
Jana Everett, PhD, University of Michigan
Stephen C. Thomas, PhD, Stanford University

Political Science (PSCI)

PSCI 1001 - Introduction to Political Science: The Quest for Freedom and Justice (3 Credits)
Introduces the study of politics, its human importance, and its relationship to social institutions. Analysis of the relationship between individual political behavior and characteristics of the political system. Development of key concepts such as power, legitimacy, authority, political socialization, and revolution. Note: Required of all PSCI majors. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

PSCI 1101 - American Political System (3 Credits)
General introduction to the American political system with emphasis on the U.S. Constitution, federalism and separation of powers. Current affairs and enduring questions of American Political life. Is America exceptional? How and why do political parties do battle? Can the U.S. system achieve social justice? Note: Courses offered through CU Succeed will also examine the Colorado Constitution and Colorado Supreme Court case studies. Required of all PSCI majors. Max hours:3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.

PSCI 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PSCI 2001 - Topics in Political Science (1-3 Credits)
Covers different areas of politics. Note: May be taken more than once for credit when topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PSCI 2006 - Global Political Issues (3 Credits)
Studies global political issues, exploring the broad forces at play in the world: international economics, national interests, military power, nationalism, ethnicity, the environment and human rights. Discussion of world events and underlying global issues, incorporating analytical tools used by political scientists. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2011 - Logic of Political Inquiry (3 Credits)
This course builds critical thinking techniques, logical habits of mind, and research skills necessary for political study. Includes argumentation basics, logical fallacies, evaluating evidence, understanding statistics, effective writing, and internet research. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PSCI 2365 - Politics of Climate Change (3 Credits)
This course shows how Political Science addresses today's most severe threat to our planet. It analyzes how societies try to mitigate and adapt to climate change at various governance levels. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2410 - Political Science through Science Fiction (3 Credits)
Explore political science concepts by analyzing works of science fiction. Course examines utopian and dystopian communities, imagined futures, and political theorizing in both classic and unusual works of fiction. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2840 - Independent Study (1-3 Credits)
An opportunity for lower division students who demonstrate academic potential to pursue the study of some subject of interest in greater detail, with supervision from a faculty member in the department. Subjects chosen and arrangements for assignments to be made between student and faculty. Prereq: One semester of course work at Downtown Denver Campus. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSCI 3000 - Topics: Conference Participation (1 Credit)
Max hours: 1 Credit.
Grading Basis: Letter Grade

PSCI 3002 - Topics in Political Science (1-3 Credits)
Covers different areas of politics. Note: May be taken more than once for credit when topics vary. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PSCI 3011 - Research Methods (3 Credits)
Design of political/social research, both qualitative and quantitative. Applications of statistical techniques and procedures to social and political phenomena. Use of computer and the Internet. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3022 - Political Systems of the World (3 Credits)
The class focuses on the analyses of various political systems around the world. Students will look at democracies and dictatorships, industrialized countries and developing countries. Though a structured comparison, students will assess and test key theories in Political Science. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

PSCI 3034 - Race, Gender, Law and Public Policy (3 Credits)
Historical overview of race and gender relations in the U.S. and an examination of the treatment of issues of race and gender in the judicial system and public policy. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

PSCI 3035 - Political Movements: Race and Gender (3 Credits)
Examines the emergence, growth, and decline of social movements for race and gender equality. Discussion of political issues of race and gender in the 1990s. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

PSCI 3042 - World Politics (3 Credits)
This course provides a basic background and theories of international relations with a focus on the interactions between states, international organizations, nongovernmental organizations, media sources, and multinational corporations. Themes examined include foreign policy, international security, political economy, human rights, international law, sustainable development, and environmental management. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

PSCI 3050 - Islamophobia (3 Credits)
Islamophobia depicts Islam and its followers as threats to civilization, human rights and progress. Course examines historical and current Islamophobia, including impacts on international relations and on domestic politics. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3064 - Power and Empowerment in the United States (3 Credits)
Introduces U.S. political economy. Analysis of the political and economic forces and structures that shape the opportunities available to the American people. Among topics included are reciprocal impacts of government and business, the federal budget, taxation, lobbying and special interests, community organizing, and elections. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3214 - Federal Law and American Indians (3 Credits)
Examines the legal and political history of the U.S. in relation to American Indian Nations. Focuses on specific laws and Supreme Court cases in federal Indian law, with analysis of U.S. policy. There will be some comparison with Indian policies of other countries. Cross-listed with ETST 3216. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3347 - Film and Politics (3 Credits)
Presents historical and contemporary films to introduce students to critical evaluation of film as a political medium. Whether designed as propaganda or entertainment, films shape and reflect critical issues in our political and social culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3840 - Independent Study: PSCI (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 3914 - The Urban Citizen (3 Credits)
Course emphasis is community, the individual, and the good life. Experiential learning and classroom discussions about capacities of urban citizens. Focus is on social, political, and economic resources that individuals command, issues of equality and inequality, and possibilities of constructive change. Prereq: A willingness to spend a semester working and studying together as a team in both the classroom and the community. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3939 - Internship (1-9 Credits)
Designed experiences involving application of political concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

PSCI 4001 - Theories of Capitalism (3 Credits)
Is capitalism "the legitimate racket of the ruling class", as Al Capone argued? Is it the "system under which greed does the least harm", as Milton Friedman suggested? Or, is it as John Keynes had it, "the astounding belief that the most wickedest of men will do the most wickedest of things for the greatest good of everyone"? This advanced undergraduate/graduate course in theories of political economy engages ideas, concepts, actors, institutions, relationships, dynamics, and structures central to a deep understanding of global industrial capitalism. The course is centered on the works of seminal theorists of capitalism from the 18th century forward, including Adam Smith, David Ricardo, Alexander Hamilton, Friedrich List, Karl Marx, CLR James, Harry Magdoff, Friedrich Hayek, Martin Luther King, Jr., Kwame Nkrumah, Jeff Sachs, Amartya Sen, and Vandana Shiva. Students in the course are provided ample opportunities, across a variety of innovative assignments, to explore the historical and social context of the theoretical perspectives presented, to compare these perspectives to one another, and to make substantive connections between theory and practice. Note: Students are not expected to have any prior coursework in political science. Students are expected to make progress in developing their reading, writing, analytical and critical thinking skills. Cross-listed with PSCI 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PSCI 4002 - Topics in Political Science (3 Credits)
Specialized areas of politics. Note: May be taken more than once for credit when topics vary. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PSCI 4009 - Politics of the Budgetary Process (3 Credits)
Develops each student's understanding of budgeting and financial management in the public and nonprofit sectors. An overview of public sector and nonprofit fiscal management is provided, along with thorough exploration of the political influences that affect financial decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4011 - GIS in Political Science (3 Credits)
Computer lab course developing methodological skills in Geographic Information Systems (GIS) in political contexts. Geospatial computerized mapping skills are important in political fields such as urban planning, electoral analysis, environmental justice, demographics, public health, and criminal justice. Designed for beginners. Cross-listed with PSCI 5011. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4014 - Media and Politics (3 Credits)
Explores the impact of the news media on the American political system, including public policy and citizen participation, and addresses trends in news coverage and media ownership, and their impact on public opinion. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4024 - State Politics: Focus Colorado (3 Credits)
Examination of American state politics, with an emphasis on Colorado. Course examines the special role of state governments in the American federal system. Focus on dominant current issues facing Colorado state government. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

PSCI 4025 - Local Governance and Globalization (3 Credits)
Introduces international political economy, consequences of globalization for localities, interplay between wealth and power among nations, multinational corporations, NGOs and the UN, and impact of their actions on local governments. Topics include development, aid, trade, outsourcing, eco-sustainability and global equity. Cross-listed with PSCI 5025. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4034 - Political Parties and Pressure Groups (3 Credits)
Democrats, Republicans, third parties, and pressure groups in the United States. Analysis of pressure politics and political behavior. Impact of parties and pressure groups on the public good. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4044 - The Presidency (3 Credits)
An overview of the historical, constitutional, and functional aspects of the presidency. Focuses on the powers and vulnerabilities of the presidency and on the style and politics of the current president. Cross-listed with PSCI 5044. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4057 - Religion and Politics (3 Credits)
Exploration of: (1) theoretical perspectives on the relationship between religion and politics; (2) causes of and justifications for the historical development of the Western separation of "church and state;" (3) contemporary responses to and analyses of this separation; and (4) several current debates about public policy in America that reveal tensions between these two spheres. Cross-listed with PSCI 5057 and RLST 4500, 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4074 - Urban Politics, Planning, and Development (3 Credits)
For the first time in world history, humanity has passed a watershed moment as the majority of all the world's people now reside in cities, rather than rural areas. Most of the world's GDP is generated in cities, but cities also consume most of the world's resources. Technological invention and cultural innovation flourish in cities, but so too does crime and anomie. In cities, profound economic and ideological struggles over competitive neoliberalism and the sharing social economy play out in spatial struggles over the shape and use of the urban places we move through daily. Can vast and growing cities be sustainable, healthy, and just? Field tours through changing Denver neighborhoods provide case-study insights. Cross-listed with PSCI 5094. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4075 - Gentrification and Social Equity (3 Credits)
Study causes and consequences of urban gentrification, and explore strategies of grassroots resistance and social equity solutions that are being mobilized to challenge the forces of gentrification. Contrast common celebrations of the waves of capital reinvestment that are fueling urban revitalization with the frequent claim of many low-income neighborhoods: "Gentrification is Class War!" Cross-listed with PSCI 5075. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4084 - Local Government and Administration (3 Credits)
Policy and administrative challenges faced by local government in the 21st century. Emphasis on cities under federalism, alternative forms of city governance, and new challenges from increasingly diverse constituents. Issues of poverty, public safety, health, transportation, environment, corruption, and accountability. Cross-listed with PSCI 5084. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4085 - Comparative Governance: Environment and Society (3 Credits)
Focuses on how public & private actors at various levels of governance address pressing social & environmental issues such as aging societies, drug abuse, air pollution & global warming. Students will learn to analyze the dynamics of conflict & cooperation, using main concepts and theories of governance literature. Cross-listed with PSCI 5085. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4094 - Seminar: American Politics (3 Credits)
Foundations of U.S. politics and contemporary political issues. Federal/state/community relations. Relationship among the three branches of the Federal government. Colorado controversies arising under the U.S. Constitution. Cross-listed with PSCI 5014. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4105 - Comparative Politics: Europe (3 Credits)
An intensive and comparative analysis of the political systems and processes of Europe. Emphasis on political culture and economy; executive-legislative relationships; electoral systems; political parties and interest groups; political conflict and citizen participation; and the impact of social changes on political institutions. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5105. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4115 - Third World Politics (3 Credits)
Examines the factors challenging political stability in low income nations and the prospects for democracy and economic development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4124 - Denver Politics (3 Credits)
Surveys Denver's dominant political and economic forces and community agendas that compete with the downtown growth machine. Examines urban renewal strategies, gentrification and grass-roots resistance, and the role of officials in shaping Denver's distribution of wealth and life-opportunities. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4126 - Politics, Power, and Profit (3 Credits)
A short introduction to international political economy, mixing theory and practice to explore states, markets, power, profit, and policy around the world. The course combines classic texts with case studies and current events, providing broad exposure to key issues and debates in the field. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4144 - Indigenous Political Systems (3 Credits)
Surveys political theory and practice in indigenous societies in the Americas. Examines the impact of indigenous political thought on Euro-American politics, especially the U.S. Constitution, and explores the contemporary impact of indigenous people on current politics. Cross-listed with ETST 4144. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4146 - Indigenous Politics (3 Credits)
Surveys the status of the world's native peoples and nations, and the role of law and politics in the future of indigenous peoples in the global arena. Examines questions of human rights, economic development, and international law and politics. Cross-listed with PSCI 5145 and ETST 4146. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4150 - Gender Politics in the Middle East: Beyond Orientalism & Islamism (3 Credits)
This course is about Middle Eastern women's subjectivity and various forms of agency. It explores the nexus of domestic, regional and international forces that shapes the lives of Middle Eastern women, in particular in the Algerian, Egyptian, Iranian, Israeli and Palestinian contexts. Far from being silent observers of the contests among these forces, as is often assumed, Middle Eastern women have been active actors in the public arena since the 19th century colonial encounter and the importation of the modern state to the region using an array of means to make their voices heard. Theirs were often more militant than those of their countrymen. The course is divided into two parts. The first part provides an overview of the theoretical notions discussed such as Orientalism, agency, colonialism and post-colonialism. Related to this theoretical section is a historical overview that is necessary to the understanding of the contemporary conditions of Middle Eastern women and the continuities and changes between past and present. The second part covers pressing topics in the lives of Middle Eastern women in the post-independence era such as the rise of Political Islam, the global trend of democratization, war and occupation. The emphasis in this section is on women as active participants in the debates surrounding these issues, rather than as objects of them. The readings assigned include both texts written by scholars from the region and by others from without. They provide analyses of the contexts within which Middle Eastern women's struggles take place. In addition, students will be exposed to materials produced by Middle Eastern women activists that express their own opinions and views in order to avoid misrepresentation and to reflect the diversity among them. Cross-listed with WGST 4150. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4155 - Political Systems of the Middle East and North Africa (3 Credits)
Comparative analysis of political processes in the Middle East and North Africa. Islamic political theory and its contemporary manifestations. The role of nationalism and the quest for modernity in the political development of this region. Parties and programmed modernization in transitional politics. Violent and nonviolent change. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4156 - The Arab-Israeli Peace Process (3 Credits)
Critical analysis of Arab and Israeli perspectives on the on-going peace negotiations in the Middle East. Historical background and religious-cultural aspects of current problems. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with ETST 4156. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4165 - Islamic Politics and Culture (3 Credits)
Comprehensive, in-depth study of Islam and Muslims. Islam is viewed as a "way of life" with social, economic, psychological, spiritual, and political implications. Among topics to be examined are: women in Islam, Jihad, fundamentalism, Islamic movements, Islam and the West. Cross-listed with RLST 3100. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4176 - Civil Resistance in Theory and Practice (3 Credits)
This course assesses forms of civil resistance against political oppression. The focus is on the struggle of non-violent resistance movements. Students will learn about the origins, successes, tactics, and strategies of civil resistance groups. Cross-listed with PSCI 5176. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4185 - Corruption in the U.S. and Abroad (3 Credits)
Explores the causes and consequences of administrative and political corruption in developed and developing countries, and evaluates various anti-corruption strategies. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4186 - East Asia in World Affairs (3 Credits)
Political and economic systems and foreign policies of East Asian powers, such as China, Japan, Taiwan, South Korea and Hong Kong; interactions of these powers and their collective economic and political roles in world affairs; major theoretical approaches to the study of East Asian powers. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PSCI 4195 - Political Systems of Sub-Saharan Africa (3 Credits)
Analysis of major types of political systems in sub-Saharan Africa and intensive case studies of selected countries exemplifying each type. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4206 - Social Movements, Democracy and Global Politics (3 Credits)
Examines global social movements as new political actors within world politics; how theoretical perspectives in international relations and democracy address these actors; and the forms of interaction among these actors, states, and global governance institutions. Cross-listed with PSCI 5206. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4207 - Theories of Social and Political Change (3 Credits)
Investigation of social and political power with respect to possibilities of change. Location of present barriers to change within ongoing histories of marginalization, exclusion, and violence. Critical examination of political inclusion and recognition. Imaginations and pursuits of just, equitable, and/or Utopian worlds. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4215 - Women's Rights, Human Rights: Global Perspectives (3 Credits)
Explores the global feminist movement's campaign to "engender" human rights. Examination of women's human-rights issues and the critique of this campaign as representing cultural imperialism. Note: this course assumes that students have completed at least two political science courses. Cross-listed with WGST 4215. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4216 - International Politics: Human Rights (3 Credits)
The system of nation states, concepts of national interest, goals of foreign policies, conduct of diplomacy, and the bearing of these elements on the problem of human rights. Presentation and evaluation of the solutions that have been offered for the securing of justice and the maintenance of peace. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4217 - Human Rights: Theory and Practice (3 Credits)
Explores the ideas of international human rights and the practical efforts to actualize rights in societies around the world. Students study the theories of rights and the evolution of rights in history. Cross-listed with PSCI 5217. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4224 - Dictatorships in 21st Century (3 Credits)
Analyzes and classifies political systems of non-democratic regimes. Reviews earlier and contemporary theories that explain the origins, survival and death of authoritarian regimes. Discusses the impact of dictatorial rule on domestic developments as well as on international relations. Cross-listed with PSCI 5224. PSCI 3022 recommended for student success. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4225 - Democracy and Democratization (3 Credits)
Examines the conditions under which countries turn from authoritarianism towards democracy and become stable democratic regimes. Also examines the impact of foreign and international factors on new democracies. Cross-listed with PSCI 5225. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4226 - The United Nations in World Affairs (3 Credits)
Current operation and future potential of the United Nations as a complex actor in world affairs, both expressing conflicting interests of its participants and promoting universal goals, including world peace, human rights, and environmental protection. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4235 - Politics and Markets in Latin America (3 Credits)
Explores political economic development in Latin America within the context of the world system. Includes the study of colonization, land tenure, foreign investment, authoritarianism, militarism, social and revolutionary movements, human rights and democratization. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4236 - American Foreign Policy (3 Credits)
Examines the postwar events, controversies, and most recent challenges in U.S. foreign policy. Analyses of the major sources of U.S. foreign policy, such as ideology, national interests, and national power. Attention to the pattern and process of foreign policy-making. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PSCI 4237 - American National Security (3 Credits)
Examines American national security, utilizing an interdisciplinary analysis of its domestic historical development and its function in the current global context. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4240 - International Security (3 Credits)
Examines old and emerging "threats" to national security, and policy responses, from theoretical, historical and geographical perspectives. Explores challenges of ethnic conflict, weapons of mass destruction, environmental and economic security. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4245 - Populist Movements around the World (3 Credits)
Political populism is on the rise in virtually every part of the world. Populist leaders, parties and movements exert direct influence when they in are power. However, they also create pressure on centrist leaders and parties and influence politics indirectly. This course explores the phenomenon of political populism around the world. We begin by defining populism and investigate cases of populist movements in the United States, Europe, the Middle East, Latin America and Asia. After that, we will engage the literature devoted to explaining the phenomenon. The course concludes with a discussion of the effects of populism and the dangers that some forms of it pose to democracy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4248 - Gender, Development and Globalization (3 Credits)
Examining the cost and impact of globalization; not only on women and gender but economic equality, human movement and displacement, sustainable development and the environment. Highlighting the complexities of a highly interconnected world and intersectional nature of a globalized world, answering the question: Who Wins? Who Loses? Cross-listed with PSCI 5245, WGST 4248 and WGST 5248. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4265 - Social Justice And Globalization (3 Credits)
Examines issues of justice and ethical responsibility in a globalizing world. Do moral obligations of individuals and institutions end at national borders or do they encompass all human beings and extend to the environment and to future generations? Cross-listed with PSCI 5265. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4266 - International Law (3 Credits)
Investigates the body of law that regulates relations between nations and provides a framework for solving common problems and disputes between nations. Note: this course is intended for political science majors. Cross-listed with PSCI 5266. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4274 - Conflict Resolution and Public Consent Building (3 Credits)
Alternative strategies for resolving or mediating conflicts facing public or nonprofit organizations and for building public consent, with emphasis on personal, interpersonal, organizational, interest-group, cross-cultural, and roots of conflict and bases for consent. Cross-listed with PSCI 5274. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4276 - Conflicts and Rights in International Law (3 Credits)
Explores contending interpretations and practices in international law regarding issues such as the legitimacy of humanitarian intervention, efficacy of truth commissions, tensions between truth and justice in cases of genocide and war crimes, and legal changes needed to devise viable rules. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5276. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4280 - The Politics of War Law (3 Credits)
Examines international laws governing armed conflict, including human rights law. Investigates the reasons for instances of compliance and violation within this international legal regime regulating war and conflict. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4286 - International Relations: War or Peace? (3 Credits)
Presents alternative theoretical frameworks for the explanation of war and peace. Investigations of the efficacy of international law, just-war norms and the UN in preventing or containing conflict. Cross-listed with PSCI 5286. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4326 - Advanced International Political Economy: Globalization (3 Credits)
Engages the current debate about globalization. Conceptualizes globalization and evaluates the pros and cons of global trade and finance for developed and developing countries. Develops a model for a sustainable and just global economy. Prereq: PSCI 4126. Cross-listed with PSCI 5326. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PSCI 4126

PSCI 4330 - U.S. Health Policy (3 Credits)
The role of public health policy as legislated at the federal and state levels. Individual health policy (e.g. social security and managed care) and public health policy (e.g. mandatory immunizations, HIV testing, air and water quality). Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4340 - Advanced International Political Economy: Global Supply Chain (3 Credits)
Many people globally rely on long, global supply chains for jobs and incomes and to acquire the goods and services they need to survive. These chains connect people all over the world—from farmers and seamstresses to multinational corporations and investment banks — to one another as they work to bring products to our store shelves and homes. Yet, as current events clearly demonstrate, these long and complicated chains are fragile and easily disrupted, contributing to rising vulnerability, insecurity, inequality, and poverty around the world. How did it come to pass that we rely on such a complex system for the things we need? Is this kind of interdependence a good idea? What alternatives exist for restructuring trade, work, and production? These questions have occupied political economists for centuries and for good reason. Thinking about supply chains means thinking about survival and our relationships with one another and the Earth. This course tackles contemporary and historical supply chains with an eye toward thinking about the future of global production, trade, and work. Cross-listed with PSCI 5340. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4354 - Environmental Politics (3 Credits)
Political, legal, and economic forces in environmental law and policy. Special emphasis on air and water pollution and on threats to public and agricultural land. Environmental groups and their opponents. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4365 - Global Ecological Crises (3 Credits)
Overview of global ecological problems such as climate change, transboundary pollutions, and loss of bio-diversity in an attempt to understand the political, economic, and cultural forces behind these problems and the status of legal and policy initiatives to address them. Cross-listed with PSCI 5365. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4407 - Early Political Thought (3 Credits)
Main currents of political thought in their historical setting from Plato to Machiavelli, with a critical evaluation of those elements of continuing worth. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4414 - Non-Profits and Social Change (3 Credits)
Explores role of non-profits in catalyzing social change. What are obstacles and opportunities to leveraging social change through nonprofits? What factors shape non-profits to be either transformational or systemstabilizing forces? Cross-listed with PSCI 5514. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4417 - Modern Political Thought (3 Credits)
Theories of modernity and its lasting social and political consequences. Topics may include liberalism and neoliberalism, capitalism and Marxism, humanism and posthumanism, racial slavery, colonialism, and ecology. PSCI 4407 is not a prerequisite for PSCI 4417. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4427 - Law, Politics and Justice (3 Credits)
Analysis of the relationship of politics, law, and justice, particularly the degree to which moral norms and political concerns should and do influence legal standards and their perceived legitimacy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4437 - Coercion and the State (3 Credits)
An analysis of: (1) the historical emergence of the modern state; (2) the theoretical justifications for the concentration of political power and the activist state; (3) the internationalization of the European state system; and (4) anarchist and Fourth World challenges. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4444 - Contemporary Culture and Politics in America (3 Credits)
Intellectual and experiential investigation of the interplay of culture and politics in American society, as manifested in literature, social and political philosophy, psychological writings and trends, radical movements, popular culture, and daily behavior. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4446 - Advanced Indigenous Peoples' Politics (3 Credits)
Builds upon the theoretical and applied foundations of PSCI 4146. Intensive study of international legal and political developments are examined, particularly in the United Nations and the Organization of American States systems. Prereq: PSCI 4144 or PSCI 4146. Cross-listed with PSCI 5446. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: PSCI 4144 or PSCI 4146

PSCI 4457 - American Political Thought (3 Credits)
Critical examination of American political life at the intersections of social categories such as race, class, gender, sexuality, disability, and Indigeneity. Exploration of key and marginal thinkers through a variety of texts and genres. Cross-listed with PSCI 5457, ETST 4457, and ETST 5457. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4477 - Constitutional Law I (3 Credits)
Nature and scope of the following American constitutional principles as developed by the U.S. Supreme Court: federalism, jurisdiction of the federal courts, separation of powers, the taxing power, and the commerce power. Case method. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4487 - Constitutional Law II (3 Credits)
Continuation of PSCI 4477, with emphasis on the war powers of the president, citizenship, the Bill of Rights, and the Civil War amendments. (Case method.) Note: PSCI 4477 is not a prerequisite for PSCI 4487. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4494 - Judicial Politics (3 Credits)
Examines principal actors in the legal system: police, lawyers, judges, citizens. About half of this course is devoted to the study of judicial behavior, especially at the Supreme Court level. Political and personal influences on judicial behavior. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4505 - Political System of Russia and Its Neighbors (3 Credits)
The class focuses on the political values, institutions and actors of Russia and its neighboring countries, covering the political developments since the late 20th century. The relations between Russia, the European Union and the United States are also analyzed. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4535 - Labor and Working Class Politics (3 Credits)
Explores the status of the labor movement both in the U.S. and internationally, as well as the political, philosophical, and social implications of socioeconomic class status and identity. Cross-listed with PSCI 5535. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4545 - Immigration Politics (3 Credits)
Introduces students to central theories of migration and a survey of immigration law and policy in the 20th century. Highlights experiences of Mexican and Latin American immigrants and related topics, including: U.S.-Mexican foreign relations, bilingual education, undocumented immigration and globalization. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5545. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSCI 4550 - The Irish Diaspora (3 Credits)
While the population of Ireland today is roughly five million, there are an estimated 80 million people worldwide and nearly 50 million people in North America who claim some Irish identity. This course will explore this massive, nearly 5 century old, diaspora, beginning with the Plantations of Ulster and subsequent Ulster Scots emigration to North America, through the Great Hunger of the 19th century and massive exodus to the United States, Canada, Australia, and beyond. The course focus heavily on Irish immigrant communities in early Colorado, specifically Leadville, examining the history of our own community as a window into the larger political, social, and economic structures that drove such a migration. The course will conclude with an examination of the N. Ireland Peace Process, Good Friday Agreement, and BREXIT, inquiring about the role that Ireland and the Irish Diaspora plays today in global politics. Note: Students in this course will travel to parts of Colorado that once had significant Irish immigrant communities, places such as Leadville, Cripple Creek/Victor, Nevadaville, and various Catholic parishes and cemeteries in Denver. Students will also be expected to perform primary source research on Irish communities in early Colorado. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4554 - Chicano and Latino Politics (3 Credits)
Analysis of the social, cultural, and economic factors that affect political behavior of Latinos. Special attention is paid to the Mexican American cultural heritage and to relations between Mexican Americans and Anglo Americans. Cross-listed with ETST 4558. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4555 - International Women's Resistance (3 Credits)
Examines local and international struggles of women to build peace and justice by resisting systems of inequality such as colonialism, racism, patriarchy, globalization, and religious intolerance. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5555, ETST 4555 and WGST 4555/5555. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4564 - Gender and Politics (3 Credits)
Inter-sectional examination of the personal and political life of gender. Exploration of constructions, performances, and creative reconfiguration of gender through a variety of texts, genres, and media. Cross-listed with WGST 4564. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4605 - Politics and Governments of South Asia (3 Credits)
Studies the political systems of Bangladesh, India, Pakistan, Sri Lanka and Nepal. The impact of British rule on the development of political institutions on the subcontinent as well as problems of political development at all levels. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4615 - Politics and Government of China (3 Credits)
Political and governmental changes within China, from the 19th century to the present. Primary emphasis on contemporary political systems and sociopolitical problems. China's struggle for independence and economic development. The Chinese revolutions, Maoist communism, and the post-Maoist period. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4645 - Comparative Political Leadership (3 Credits)
Comparative study of historical, socio-cultural, and psychological bases of political leadership. Leadership types in peasant societies, empires, and revolutionary movements. Dilemmas of democratic versus authoritarian leadership in modernizing and industrial states. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4726 - Seminar on U.S. and China Relations (3 Credits)
Detailed examination of historical context and current issues in U.S./China relations. Emphasis on modern period, with particular attention to changing relations in context of rising power of China. Cross-listed with PSCI 5726. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4736 - The Middle East in World Affairs (3 Credits)
Evolution and revolution in the Middle East. The character of nationalism in the area. Analysis of inter-regional and international problems affecting the Middle East, with special emphasis on current Arab-Israeli relations. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4757 - Legal Reasoning and Writing (3 Credits)
Introduces the fundamentals of legal reasoning and legal argumentation through intensive class discussion, formal debate and writing. Attention is given to the relationship between case and statutory law and their application in trial and appeals courts in the United States. Note: this course assumes that students have completed ENGL 1020, 2030, and any 3000-level English/writing course, or COMM 3120. Cross-listed with PSCI 5747, COMM 4750, 5750. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4770 - Middle East Politics and Society in Film (3 Credits)
This course explores the intersection between politics and cinema in the Middle East. More precisely, it discusses the efforts of various international, regional, and local actors to construct meanings, mobilize support and legitimize their policies through film. Topics covered include nationalism and cinema, globalization and transnational cinema, the Arab-Israeli conflict, Political Islam and Islamic cinema. In addition to readings written by scholars from within and from outside the region, we will be analyzing American, Arab, Canadian, Iranian, and Israeli movies and documentaries that pertain to the topics covered in the course. The list of movies and documentaries watched in class will vary from year to year. Some of the movies that will be used frequently are: Lawrence of Arabia, Exodus, Argo and American Sniper. Term Offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4807 - Political Violence (3 Credits)
Investigates different types of political violence including genocide, ethnic and religious conflict, revolution, terrorism, war, state repression and others. Introduces theories of individual, collective and institutional violence, applies them to a range of case studies and explores possible solutions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4808 - Strategies of Peacebuilding (3 Credits)
The course investigates the theories and strategies of peacebuilding in societies that have endured intrastate conflict and/or massive human rights violates and asks whether peace and justice and democracy can or should work together and how forgiveness and reconciliation might develop. Cross-listed with PSCI 5808. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4827 - Women and the Law (3 Credits)
Examines the role of the courts in the development of public policy toward women; how the legal system affects the economic power, family roles, safety and political participation of women. Cross-listed with ETST 4827 and WGST 4827. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4837 - Contemporary Issues in Civil Liberties (3 Credits)
Conflicting rights of individuals and groups in several areas of civil liberties, including religious groups, free speech, sexual freedom, racial quotas, and anti-governmental actions and publications. This course includes case law, readings, guest speakers and case discussions. Cross-listed with PSCI 5837. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4840 - Independent Study: PSCI (1-3 Credits)
An opportunity for advanced students with good scholastic records, and with appropriate courses completed, to pursue independently the study of some subject of special interest to them. Subjects chosen and arrangements made to suit the needs of each student. Note: Primarily for seniors. Prereq: 15 semester hours in political science and permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PSCI 4878 - War, Film, and International Law (3 Credits)
This course examines interactions of culture, politics, and law by chronologically investigating 20th-century war movies and the ways experiences and norms have shaped and been shaped by cinematic representations. Cross-listed with PSCI 5878. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4914 - Community Organizing and Community Development (3 Credits)
The theory and practice of community organizing strategies and community development innovations. How can social activists build power at the grassroots to build equitable, sustainable, and healthy communities? Cross-listed with PSCI 5914. Note: Students will not receive credit for this course if they have already earned credit for PSCI 3075. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4934 - CU at the Capitol (3 Credits)
Interested in building your professional experience and learning about politics first-hand with an internship as a legislative aide in the Colorado General Assembly? Each student in this course will be placed in a state government internship (students must apply for widely available positions). Working in settings such as the state capitol, legislator offices, committee hearings, and constituent meetings, students will learn first-hand about the current year legislative session of Colorado General Assembly, while networking with Colorado's political powerhouses. To supplement field experience, class meetings will allow interns to discuss current state politics and the complexities of politics as a vocation. Please note: Any student enrolling for this course must contact the course instructor immediately for assistance in landing an internship before the spring semester begins. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4944 - CU in the City (3 Credits)
Investigation of community development strategies through seminar discussions, urban walking tours, and student field placement with a local community based organization, non-profit, or public office engaged in community development work. Cross-listed with PSCI 5944. Recommended Preparation: PSCI 3075 Community Organizing and Development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4960 - Capstone in Political Science (3 Credits)
All students in this class are near the completion of their undergraduate degree in Political Science. Congratulations on this impending achievement! This capstone course will be your opportunity to produce a sophisticated piece of work that should be one of the most demanding and impressive projects you will complete as an undergraduate--it is the capstone of your intellectual journey through your political science major. You will spend the entire semester working on this project, receiving feedback from your peers and providing feedback to them as each of you work on your respective projects. This capstone project will facilitate independent student research in Political Science and assist students in developing advanced writing and communication skills. Students will engage and enhance their critical thinking skills and will educate each other through discussions, oral presentations, and written analysis. Both independent and/or group capstone projects may be part of this course. Restriction: Students must have completed 27 credits hours in Political Science (PSCI) with a C- or higher in order to register. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students must have completed 27 credits hours in Political Science (PSCI) with a C- or higher in order to register.
Typically Offered: Fall, Spring.

PSCI 4995 - Global Study Topics (1-3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with PSCI 5995. Term offered: summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Summer.

Political Science, BA

Introduction

Please click here (p. 766) to see Political Science department information.

Courses are distributed among the primary fields as listed in this section, i.e., American politics, comparative politics, international relations, political theory and public policy and administration.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This program can be completed online or on-campus.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 credit hours, from approved courses.
2. Students must complete a minimum of 21 upper division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 PSCI credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Exceptions to the Experiential Learning Requirement

    - In lieu of taking one of the identified courses, students may complete a substantial experiential learning project in a different PSCI class. The course instructor must certify with a written submission to the departmental undergraduate advisor that the experiential learning project in that course fulfills the departmental experiential learning requirement.
    - Students with preexisting significant political or civic engagement experience in the community (i.e., community and civic leadership work, or work with government agencies, on political campaigns, or in non-governmental organizations) or for whom the experiential learning requirement poses a hardship may petition the undergraduate advisor to waive the requirement.
    - **Note:** In either of these cases of exception to the Experiential Learning coursework requirement, 39 total credit hours in political science are still required for graduation.

Code	Title	Hours
Complete the following program requirements:		
Complete the following required courses:		*9*
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice	
PSCI 1101	American Political System	
PSCI 2011	Logic of Political Inquiry [1]	
Complete two Political Theory courses from the approved course list:		*6*
Political Theory (p. 777)		
Complete one American Politics course from the approved course list:		*3*
American Politics (p. 777)		
Complete one Comparative Politics course from the approved course list:		*3*
Comparative Politics (p. 777)		
Complete one International Politics course from the approved course list:		*3*
International Politics (p. 777)		
Complete nine additional Political Science (PSCI) elective credit hours.		*9*
Complete a minimum of three credit hours from the following Experiential Learning courses: [2]		*3*
PSCI 3000	Topics: Conference Participation	
PSCI 3840	Independent Study: PSCI	
PSCI 3914	The Urban Citizen	
PSCI 3939	Internship	
PSCI 4840	Independent Study: PSCI	
PSCI 4880	Directed Research	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	
PSCI 4995	Global Study Topics	
Complete the Political Science Capstone course, after completing at least 27 credit hours in the major.		*3*
PSCI 4960	Capstone in Political Science	
Total Hours		**39**

1. This course must be taken by all majors as part of their first 24 credit hours in the program. If this requirement poses a hardship due to such issues as late-declaring majors, scheduling problems, or students transferring in multiple credits, please contact the Department undergraduate advisor to craft a solution.
2. See exceptions under program restrictions, allowances and recommendations above.

Political Theory

Code	Title	Hours
Complete two of the following:		*6*
PSCI 4001	Theories of Capitalism	
PSCI 4057	Religion and Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4407	Early Political Thought	
PSCI 4417	Modern Political Thought	
PSCI 4427	Law, Politics and Justice	
PSCI 4437	Coercion and the State	
PSCI 4457	American Political Thought	
PSCI 4564	Gender and Politics	

American Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3214	Federal Law and American Indians	
PSCI 3347	Film and Politics	
PSCI 3914	The Urban Citizen	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4014	Media and Politics	
PSCI 4024	State Politics: Focus Colorado	
PSCI 4025	Local Governance and Globalization	
PSCI 4034	Political Parties and Pressure Groups	
PSCI 4044	The Presidency	
PSCI 4074	Urban Politics, Planning, and Development	
PSCI 4075	Gentrification and Social Equity	
PSCI 4084	Local Government and Administration	
PSCI 4094	Seminar: American Politics	
PSCI 4124	Denver Politics	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4330	U.S. Health Policy	
PSCI 4354	Environmental Politics	
PSCI 4414	Non-Profits and Social Change	
PSCI 4444	Contemporary Culture and Politics in America	
PSCI 4477	Constitutional Law I	
PSCI 4487	Constitutional Law II	
PSCI 4494	Judicial Politics	
PSCI 4535	Labor and Working Class Politics	
PSCI 4545	Immigration Politics	
PSCI 4554	Chicano and Latino Politics	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4827	Women and the Law	
PSCI 4837	Contemporary Issues in Civil Liberties	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	

Comparative Politics

Code	Title	Hours
*Complete one of the following**		*3*
PSCI 3022	Political Systems of the World	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4165	Islamic Politics and Culture	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4225	Democracy and Democratization	
PSCI 4245	Populist Movements around the World	
PSCI 4248	Gender, Development and Globalization	
PSCI 4265	Social Justice And Globalization	
PSCI 4446	Advanced Indigenous Peoples' Politics	
PSCI 4505	Political System of Russia and Its Neighbors	
PSCI 4555	International Women's Resistance	
PSCI 4605	Politics and Governments of South Asia	
PSCI 4615	Politics and Government of China	
PSCI 4645	Comparative Political Leadership	
PSCI 4807	Political Violence	
PSCI 4914	Community Organizing and Community Development	
PSCI 4995	Global Study Topics	

International Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3042	World Politics	
PSCI 3050	Islamophobia	
PSCI 3064	Power and Empowerment in the United States	
PSCI 4025	Local Governance and Globalization	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4126	Politics, Power, and Profit	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	

PSCI 4165	Islamic Politics and Culture
PSCI 4176	Civil Resistance in Theory and Practice
PSCI 4185	Corruption in the U.S. and Abroad
PSCI 4186	East Asia in World Affairs
PSCI 4195	Political Systems of Sub-Saharan Africa
PSCI 4206	Social Movements, Democracy and Global Politics
PSCI 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4216	International Politics: Human Rights
PSCI 4224	Dictatorships in 21st Century
PSCI 4225	Democracy and Democratization
PSCI 4226	The United Nations in World Affairs
PSCI 4235	Politics and Markets in Latin America
PSCI 4236	American Foreign Policy
PSCI 4237	American National Security
PSCI 4240	International Security
PSCI 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4266	International Law
PSCI 4274	Conflict Resolution and Public Consent Building
PSCI 4276	Conflicts and Rights in International Law
PSCI 4280	The Politics of War Law
PSCI 4286	International Relations: War or Peace?
PSCI 4326	Advanced International Political Economy: Globalization
PSCI 4365	Global Ecological Crises
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4555	International Women's Resistance
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4726	Seminar on U.S. and China Relations
PSCI 4736	The Middle East in World Affairs
PSCI 4807	Political Violence
PSCI 4808	Strategies of Peacebuilding
PSCI 4878	War, Film, and International Law
PSCI 4995	Global Study Topics

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/polisci/undergraduate/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Political Science - Politics and Public Policy Option, BA

Introduction

Please click here (p. 766) to see Political Science department information.

This option was designed for students who desire to pursue careers in public policy and/or public administration in the public or nonprofit sectors. This BA track emphasizes the specifically political aspects of public policy processes and is grounded in political science theory and familiarity with American, Comparative and International politics. Courses will emphasize key policy issues confronting U.S. local, state and national decision makers and citizens. A focus on politics and the policy-making process will prepare students conceptually and methodologically to move beyond partisan politics to address how leaders can best mobilize resources to achieve constituent goals consistent with the public interest.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This program can be completed online or on-campus.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 credit hours, from approved courses.
2. Students must complete a minimum of 21 upper division (3000-level and above) credit hours, from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 PSCI credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students with significant pre-existing political or civic engagement experience in the community, or for whom the experiential- learning requirement poses a hardship may petition the chair to waive the experiential-learning requirement; the overall requirement of 39 credit hours for Political Science graduation will still apply.

Code	Title	Hours
Complete the following program requirements:		**39**
Complete the following required courses:		*9*
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice	
PSCI 1101	American Political System	
PSCI 2011	Logic of Political Inquiry	
Complete two Public Policy and Administration courses from the approved course list:		*6*
Public Policy and Administration (p. 780)		
Complete one American Politics course from the approved course list:		*3*

American Politics (p. 780)		
Complete one Comparative Politics and International Relations course from the approved course list:		*3*
Comparative Politics and International Relations (p. 781)		
Complete one Political Theory course from the approved course list:		*3*
Political Theory (p. 782)		
Complete 9 additional hours of PSCI courses.		*9*
Complete a minimum of three credit hours from the following Experiential Learning courses:		*3*
PSCI 3000	Topics: Conference Participation	
PSCI 3840	Independent Study: PSCI	
PSCI 3914	The Urban Citizen	
PSCI 3939	Internship	
PSCI 4840	Independent Study: PSCI	
PSCI 4880	Directed Research	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	
PSCI 4995	Global Study Topics	
Complete the Political Science Capstone course, after completing at least 27 credit hours in the major.		*3*
PSCI 4960	Capstone in Political Science	

Public Policy and Administration

Code	Title	Hours
Complete two of the following		*6*
PSCI 2365	Politics of Climate Change	
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3214	Federal Law and American Indians	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4024	State Politics: Focus Colorado	
PSCI 4025	Local Governance and Globalization	
PSCI 4034	Political Parties and Pressure Groups	
PSCI 4084	Local Government and Administration	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4124	Denver Politics	
PSCI 4274	Conflict Resolution and Public Consent Building	
PSCI 4236	American Foreign Policy	
PSCI 4330	U.S. Health Policy	
PSCI 4354	Environmental Politics	
PSCI 4365	Global Ecological Crises	
PSCI 4414	Non-Profits and Social Change	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	

American Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3214	Federal Law and American Indians	
PSCI 3347	Film and Politics	
PSCI 3914	The Urban Citizen	
PSCI 4014	Media and Politics	
PSCI 4024	State Politics: Focus Colorado	
PSCI 4025	Local Governance and Globalization	

PSCI 4034	Political Parties and Pressure Groups
PSCI 4044	The Presidency
PSCI 4074	Urban Politics, Planning, and Development
PSCI 4075	Gentrification and Social Equity
PSCI 4084	Local Government and Administration
PSCI 4094	Seminar: American Politics
PSCI 4124	Denver Politics
PSCI 4236	American Foreign Policy
PSCI 4237	American National Security
PSCI 4330	U.S. Health Policy
PSCI 4354	Environmental Politics
PSCI 4414	Non-Profits and Social Change
PSCI 4444	Contemporary Culture and Politics in America
PSCI 4477	Constitutional Law I
PSCI 4487	Constitutional Law II
PSCI 4494	Judicial Politics
PSCI 4535	Labor and Working Class Politics
PSCI 4545	Immigration Politics
PSCI 4554	Chicano and Latino Politics
PSCI 4726	Seminar on U.S. and China Relations
PSCI 4827	Women and the Law
PSCI 4837	Contemporary Issues in Civil Liberties
PSCI 4914	Community Organizing and Community Development
PSCI 4934	CU at the Capitol

Comparative Politics and International Relations

Code	Title	Hours
*Complete one of the following**		*3*
PSCI 3022	Political Systems of the World	
PSCI 3042	World Politics	
PSCI 3050	Islamophobia	
PSCI 3064	Power and Empowerment in the United States	
PSCI 4025	Local Governance and Globalization	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4126	Politics, Power, and Profit	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4165	Islamic Politics and Culture	
PSCI 4176	Civil Resistance in Theory and Practice	
PSCI 4185	Corruption in the U.S. and Abroad	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4216	International Politics: Human Rights	
PSCI 4224	Dictatorships in 21st Century	
PSCI 4225	Democracy and Democratization	

PSCI 4226	The United Nations in World Affairs
PSCI 4235	Politics and Markets in Latin America
PSCI 4236	American Foreign Policy
PSCI 4237	American National Security
PSCI 4240	International Security
PSCI 4245	Populist Movements around the World
PSCI 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4266	International Law
PSCI 4274	Conflict Resolution and Public Consent Building
PSCI 4276	Conflicts and Rights in International Law
PSCI 4280	The Politics of War Law
PSCI 4286	International Relations: War or Peace?
PSCI 4326	Advanced International Political Economy: Globalization
PSCI 4365	Global Ecological Crises
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4555	International Women's Resistance
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4645	Comparative Political Leadership
PSCI 4726	Seminar on U.S. and China Relations
PSCI 4736	The Middle East in World Affairs
PSCI 4807	Political Violence
PSCI 4808	Strategies of Peacebuilding
PSCI 4914	Community Organizing and Community Development
PSCI 4995	Global Study Topics

Political Theory

Code	Title	Hours
Complete one of the following:		*3*
PSCI 4057	Religion and Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4407	Early Political Thought	
PSCI 4417	Modern Political Thought	
PSCI 4427	Law, Politics and Justice	
PSCI 4437	Coercion and the State	
PSCI 4457	American Political Thought	
PSCI 4564	Gender and Politics	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/polisci/undergraduate/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Political Science, BA with Secondary Teaching Licensure Endorsement

Introduction

Please click here (p. 766) to see Political Science department information.

Political science focuses on fundamental questions that go to the heart of the human experience. Political science students study critical issues such as war and peace, international affairs, environmental challenges, poverty and racism, and the struggles of oppressed peoples. Such study prepares students for various careers by building analytical and writing skills while encouraging independent thought, respect, and interest in current affairs. Graduates commonly work in fields such as law and government, nonprofit organizations, teaching, journalism, international organizations, business, and election campaigns.

The Political Science department prepares students for informed and creative activism by providing them an opportunity to develop analytical skills. The program incorporates historical, quantitative, experimental, ethnographic, psychological, and creative methodologies while aiming to sensitize students to the essential questions of politics and life. Many of our graduates are community organizers, attorneys or public servants in local, state or federal government. We have become nationally known for our programs in indigenous politics, international human rights, and inner-city community development. Students will find ample opportunity to explore the innovative community engagement programs while receiving real-world experience in a variety of professional and community settings.

The secondary licensure program is a partnership program between the College of Liberal Arts and Sciences (CLAS) and the School of Education & Human Development (SEHD). Secondary Education Licensure students choose a major within CLAS and complete all CORE, CLAS, major, and initial teacher education admission requirements before completing a final professional year of licensure coursework through the SEHD.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 39 PSCI credit hours.
2. Students must complete a minimum of 21 upper division (3000-level and above) PSCI credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to program requirements.
4. Students must complete a minimum of 15 PSCI credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

Students are responsible for meeting with the advisor in the SEHD to confirm teacher education and licensure requirements. In addition to completing all minimum program requirements above, SEHD secondary education students must complete the following minimum SEHD licensure (p. 927) requirements:

1. Complete the Education Declaration form and all subsequent processes and requirements, including a background check, prior to April 1st (for students intending to complete their clinical field experience in fall) or November 1st (for students intending to complete their clinical field experience in spring). Students must meet with the SEHD advisor for detailed information.
2. Student pursuing secondary education licensure must complete the following requirements to be admitted to the Professional (final) Year:
   a. a minimum cumulative CU GPA of 3.0 or higher. Students with a lower GPA may be considered under certain conditions.
   b. all CU Denver Core, CLAS, major, electives, and initial teacher education coursework requirements prior to the start of the Professional Year
   c. the official application and interview process
   d. Deadlines for Professional Year application are February 15th (for students intending to begin Professional Year in fall) or October 1st (for students intending to begin Professional Year in spring).
3. Students must complete all initial teacher education and professional (final) year coursework with a minimum grade of B- or higher.

Code	Title	Hours
Complete the following Political Science major requirements:		**39**
Complete the following required courses:		*9*
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice	
PSCI 1101	American Political System	
PSCI 2011	Logic of Political Inquiry [1]	
Complete two Political Theory courses from the approved course list:		*6*
Political Theory (p. 784)		
Complete one American Politics course from the approved course list:		*3*
American Politics (p. 784)		
Complete one Comparative Politics course from the approved course list:		*3*

Comparative Politics (p. 784)		
Complete one International Politics course from the approved course list:		*3*
International Politics (p. 785)		
Complete nine additional Political Science (PSCI) elective credit hours.		*9*
Complete a minimum of three credit hours from the following Experiential Learning courses: [2]		*3*
PSCI 3000	Topics: Conference Participation	
PSCI 3840	Independent Study: PSCI	
PSCI 3914	The Urban Citizen	
PSCI 3939	Internship	
PSCI 4840	Independent Study: PSCI	
PSCI 4880	Directed Research	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	
PSCI 4995	Global Study Topics	
Complete the Political Science Capstone course, after completing at least 27 credit hours in the major.		*3*
PSCI 4960	Capstone in Political Science	
In addition to the Political Science major requirements, students should complete secondary social science coursework and must complete licensure requirements as outlined by the School of Education and Human Development.		
Secondary Social Studies Recommended Courses (p. 785)		
SEHD Licensure Requirements (p. 786)		

[1] This course must be taken by all majors as part of their first 24 credit hours in the program. If this requirement poses a hardship due to such issues as late-declaring majors, scheduling problems, or students transferring in multiple credits, please contact the Department undergraduate advisor to craft a solution.

Political Theory

Code	Title	Hours
Complete two of the following		*6*
PSCI 4057	Religion and Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4407	Early Political Thought	
PSCI 4417	Modern Political Thought	
PSCI 4427	Law, Politics and Justice	
PSCI 4437	Coercion and the State	
PSCI 4457	American Political Thought	
PSCI 4564	Gender and Politics	

American Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3034	Race, Gender, Law and Public Policy [1]	
or PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3214	Federal Law and American Indians	
PSCI 3347	Film and Politics	
PSCI 3914	The Urban Citizen	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4014	Media and Politics	
PSCI 4024	State Politics: Focus Colorado	
PSCI 4025	Local Governance and Globalization	
PSCI 4034	Political Parties and Pressure Groups	
PSCI 4044	The Presidency	
PSCI 4074	Urban Politics, Planning, and Development	
PSCI 4075	Gentrification and Social Equity	
PSCI 4084	Local Government and Administration	
PSCI 4094	Seminar: American Politics	
PSCI 4124	Denver Politics	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4330	U.S. Health Policy	
PSCI 4354	Environmental Politics	
PSCI 4414	Non-Profits and Social Change	
PSCI 4444	Contemporary Culture and Politics in America	
PSCI 4477	Constitutional Law I	
PSCI 4487	Constitutional Law II	
PSCI 4494	Judicial Politics	
PSCI 4535	Labor and Working Class Politics	
PSCI 4545	Immigration Politics	
PSCI 4554	Chicano and Latino Politics	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4827	Women and the Law	
PSCI 4837	Contemporary Issues in Civil Liberties	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	

[1] PSCI 3034 Race, Gender, Law and Public Policy or PSCI 3035 Political Movements: Race and Gender will also count as CU Denver Core Cultural Diversity, so students are advised to complete one of these courses.

Comparative Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3022	Political Systems of the World [2]	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4165	Islamic Politics and Culture	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4206	Social Movements, Democracy and Global Politics	

PSCI 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4225	Democracy and Democratization
PSCI 4245	Populist Movements around the World
PSCI 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4555	International Women's Resistance
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4645	Comparative Political Leadership
PSCI 4807	Political Violence
PSCI 4914	Community Organizing and Community Development
PSCI 4995	Global Study Topics

[2] PSCI 3022 Political Systems of the World and PSCI 3042 World Politics will also count as CU Denver Core International Perspectives, so students are advised to complete one of these courses to complete the Comparative or International Politics requirement.

International Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3042	World Politics [2]	
PSCI 3050	Islamophobia	
PSCI 3064	Power and Empowerment in the United States	
PSCI 4025	Local Governance and Globalization	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4126	Politics, Power, and Profit	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4165	Islamic Politics and Culture	
PSCI 4176	Civil Resistance in Theory and Practice	
PSCI 4185	Corruption in the U.S. and Abroad	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4216	International Politics: Human Rights	
PSCI 4224	Dictatorships in 21st Century	
PSCI 4225	Democracy and Democratization	
PSCI 4226	The United Nations in World Affairs	
PSCI 4235	Politics and Markets in Latin America	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4240	International Security	
PSCI 4248	Gender, Development and Globalization	
PSCI 4265	Social Justice And Globalization	
PSCI 4266	International Law	
PSCI 4274	Conflict Resolution and Public Consent Building	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4280	The Politics of War Law	
PSCI 4286	International Relations: War or Peace?	
PSCI 4326	Advanced International Political Economy: Globalization	
PSCI 4365	Global Ecological Crises	
PSCI 4446	Advanced Indigenous Peoples' Politics	
PSCI 4505	Political System of Russia and Its Neighbors	
PSCI 4555	International Women's Resistance	
PSCI 4605	Politics and Governments of South Asia	
PSCI 4615	Politics and Government of China	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4736	The Middle East in World Affairs	
PSCI 4807	Political Violence	
PSCI 4808	Strategies of Peacebuilding	
PSCI 4878	War, Film, and International Law	
PSCI 4995	Global Study Topics	

[2] PSCI 3022 Political Systems of the World and PSCI 3042 World Politics will also count as CU Denver Core International Perspectives, so students are advised to complete one of these courses to complete the Comparative or International Politics requirement.

Secondary Social Studies Recommended Courses

Code	Title	Hours
In order to prepare for the Social Studies licensure, students should take all of the following courses:		
These courses will also count toward Political Science CU Denver and CLAS graduation requirements, as identified.		

Anthropology

Code	Title	Hours
ANTH 1303	Introduction to Biological Anthropology	
ANTH 2102	Culture and the Human Experience	

* *ANTH 1303 Introduction to Biological Anthropology Will count as CU Denver Core Nat/Phys Science with lab. ANTH 2102 Culture and the Human Experience will count toward either CU Denver Behavioral Science or CLAS Behavioral Science.*

Economics

Code	Title	Hours
ECON 2012	Principles of Economics: Macroeconomics	

* *Will count as CU Denver Core Social Sciences or CLAS Social Science.*

Geography

Code	Title	Hours
GEOG 1102	World Regions Global Context	
GEOG 1202	Introduction to Physical Geography	

* GEOG 1202 Introduction to Physical Geography *will count as CLAS Nat/Phys Science without lab and GEOG 1102 will count as CU Denver Core Social Science or CLAS Social Science.*

History

Code	Title	Hours
HIST 1361	U.S. History to 1876	
HIST 1362	U.S. History Since 1876	

* *HIST 1361 U.S. History to 1876 and HIST 1362 U.S. History Since 1876 will fulfill the CU Denver Core Humanities and the CLAS Humanities requirements.*

Political Science

Code	Title	Hours
PSCI 3022	Political Systems of the World	
or PSCI 3042	World Politics	
PSCI 3034	Race, Gender, Law and Public Policy	
or PSCI 3035	Political Movements: Race and Gender	

* *PSCI 3022 Political Systems of the World or PSCI 3042 World Politics will count as CU Denver Core International Perspectives.*

PSCI 3034 Race, Gender, Law and Public Policy or PSCI 3035 Political Movements: Race and Gender will count as CU Denver Core Cultural Diversity.

Psychology

Code	Title	Hours
PSYC 1005	Introduction to Psychology II	

* *Will count toward either CU Denver Behavioral Science or CLAS Behavioral Science.*

SEHD Licensure Coursework Requirements

Students must complete SEHD licensure requirements located here (p. 927).

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/polisci/undergraduate/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Political Science, 4 + 1 BA/ MA

Introduction

Please click here (p. 766) to see Political Science department information.

The 4+1 accelerated Master's program in Political Science is an expedited program of study that allows students to complete a Bachelor's degree in Political Science and a Master's degree in Political Science in as few as 5 years. Students will follow the undergraduate curriculum for Political Science and work closely with their faculty advisor to begin taking Political Science graduate level coursework as they complete their undergraduate degree. They will complete no more than 15 credits as an undergraduate that will apply to both their undergraduate and graduate degrees. Students may officially declare their intent to complete this program in either their junior or senior year, and may apply to the graduate program during their senior year. Application requirements may differ from the traditional two-year MA, which is why students need to work closely with faculty advisors and the political science graduate program director for more information and to ensure they are following the best track to complete coursework so that they only have one year after completing the undergraduate degree, to complete the graduate requirements.

Program Delivery

- This is an on-campus program.

Declaring This Program

- Click here (p. 380) to go to information about declaring a major.

The PSCI 4+1 BA/MA program is open to any PSCI major who has reached junior-level status (completed 60-credit hours of coursework) with a GPA greater than 3.0. Students eligible to declare the PSCI BA/MA degree program must be active CU Denver students who have competed at least one semester in residence at CU Denver, including at least two CU Denver PSCI courses.

In order to declare the PSCI 4+1 BA/MA program prior to completion of the BA degree, interested students should consult with both the PSCI undergraduate and PSCI graduate advisors. Students must complete a 4+1 BA/MA degree intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary. Completed 4+1 degree declaration forms are submitted to CLAS Advising for processing.

All students who have declared the 4+1 degree program option as undergraduates must submit a formal application through the CU Denver Graduate Admission's online application system during their final semester of undergraduate coursework. The department's preferred application deadlines are April 1 (summer term), May 1 (fall term), and November 1 (spring term).

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Graduate Education Policies and Procedures apply to this program.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BA degree in political science (p. 776), they may also complete some of the requirements for an MA degree in political science (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/political-science/political-science-ma/) by participating in the BA/MA program using the following guidelines:

1. The student must apply and be accepted for participation in the BA/MA program prior to completion of the BA degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. A minimum of 39 undergraduate hours and 33 graduate hours of Political Science credits hours must be completed to earn both an undergraduate and a graduate degree through this 4+1 program.
3. A minimum of 21 PSCI credit hours applied toward the BA must be taken at the upper division (3000-level and above) level and all credits applied toward the MA must be completed at the graduate level.
4. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. Students must earn a minimum grade of B- (2.7) in any graduate level course for it to later be counted towards graduate degree requirements. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P +/P/F or S/U grading cannot apply to major or graduate program requirements.
5. A minimum of 15 semester hours applied toward the BA must be taken from CU Denver faculty and all graduate coursework must be completed with CU Denver faculty.

Program Allowances and Restrictions

1. Up to 15 graduate level credit hours in Political Science may be taken by Political Science undergraduates accepted to the 4+1 program, and these credits will count both towards completion of the undergraduate degree, and the graduate degree in political science, if the student is later accepted into the graduate program.
2. Complete all Political Science undergraduate major requirements. Refer to the undergraduate Political Science (p. 776) catalog page.
3. To secure admission to the Political Science graduate program, submit formal graduate application during the senior year.
4. No more than 15 undergraduate credit hours may "double-count" for the M.A.. Elective courses must be in accordance with Graduate Education Policies. Therefore, meeting with an advisor regularly is

recommended. Eligible students may declare the 4+1 BA/MA program after reaching junior-level standing as an undergraduate.

To learn more about the Student Learning Outcomes for the Undergraduate program, please visit our website (https://clas.ucdenver.edu/polisci/undergraduate/).

To learn more about the Student Learning Outcomes for the Graduate program, please visit our website (https://clas.ucdenver.edu/polisci/graduate/).

Political Science Minor

Introduction

Please click here (p. 766) to see Political Science department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is both an on-campus program and online program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 15 PSCI credit hours.
2. Students must complete a minimum of 12 upper-division (3000-level and above) PSCI credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PSCI credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. PSCI 4002 Topics in Political Science may also apply to the minor. Please contact the political science undergraduate advisor for more information.

Code	Title	Hours
Complete the following program requirements:		**15**
Complete one of the following courses:		*3*
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice	
or PSCI 1101	American Political System	
Complete one American Politics course from the approved course list:		*3*
American Politics (p. 789)		
Complete one Comparative Politics course from the approved course list:		*3*
Comparative Politics (p. 789)		
Complete one International Politics course from the approved course list:		*3*
International Politics (p. 790)		
Complete one Political Theory course from the approved course list:		*3*
Political Theory (p. 790)		

American Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3214	Federal Law and American Indians	
PSCI 3347	Film and Politics	
PSCI 3914	The Urban Citizen	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4014	Media and Politics	
PSCI 4024	State Politics: Focus Colorado	
PSCI 4025	Local Governance and Globalization	
PSCI 4034	Political Parties and Pressure Groups	
PSCI 4044	The Presidency	
PSCI 4074	Urban Politics, Planning, and Development	
PSCI 4075	Gentrification and Social Equity	
PSCI 4084	Local Government and Administration	
PSCI 4094	Seminar: American Politics	
PSCI 4124	Denver Politics	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4330	U.S. Health Policy	
PSCI 4354	Environmental Politics	
PSCI 4414	Non-Profits and Social Change	
PSCI 4444	Contemporary Culture and Politics in America	
PSCI 4477	Constitutional Law I	
PSCI 4487	Constitutional Law II	
PSCI 4494	Judicial Politics	
PSCI 4535	Labor and Working Class Politics	
PSCI 4545	Immigration Politics	
PSCI 4554	Chicano and Latino Politics	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4827	Women and the Law	
PSCI 4837	Contemporary Issues in Civil Liberties	
PSCI 4914	Community Organizing and Community Development	
PSCI 4934	CU at the Capitol	

Comparative Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3022	Political Systems of the World	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4144	Indigenous Political Systems	

PSCI 4146	Indigenous Politics
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism
PSCI 4155	Political Systems of the Middle East and North Africa
PSCI 4156	The Arab-Israeli Peace Process
PSCI 4165	Islamic Politics and Culture
PSCI 4186	East Asia in World Affairs
PSCI 4195	Political Systems of Sub-Saharan Africa
PSCI 4206	Social Movements, Democracy and Global Politics
PSCI 4215	Women's Rights, Human Rights: Global Perspectives
PSCI 4225	Democracy and Democratization
PSCI 4245	Populist Movements around the World
PSCI 4248	Gender, Development and Globalization
PSCI 4265	Social Justice And Globalization
PSCI 4446	Advanced Indigenous Peoples' Politics
PSCI 4505	Political System of Russia and Its Neighbors
PSCI 4555	International Women's Resistance
PSCI 4605	Politics and Governments of South Asia
PSCI 4615	Politics and Government of China
PSCI 4645	Comparative Political Leadership
PSCI 4807	Political Violence
PSCI 4914	Community Organizing and Community Development
PSCI 4995	Global Study Topics

International Politics

Code	Title	Hours
Complete one of the following		*3*
PSCI 3042	World Politics	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3050	Islamophobia	
PSCI 4025	Local Governance and Globalization	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4126	Politics, Power, and Profit	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4165	Islamic Politics and Culture	
PSCI 4176	Civil Resistance in Theory and Practice	
PSCI 4185	Corruption in the U.S. and Abroad	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4216	International Politics: Human Rights	
PSCI 4225	Democracy and Democratization	
PSCI 4224	Dictatorships in 21st Century	
PSCI 4226	The United Nations in World Affairs	
PSCI 4235	Politics and Markets in Latin America	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4240	International Security	
PSCI 4248	Gender, Development and Globalization	
PSCI 4265	Social Justice And Globalization	
PSCI 4266	International Law	
PSCI 4274	Conflict Resolution and Public Consent Building	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4280	The Politics of War Law	
PSCI 4286	International Relations: War or Peace?	
PSCI 4326	Advanced International Political Economy: Globalization	
PSCI 4365	Global Ecological Crises	
PSCI 4446	Advanced Indigenous Peoples' Politics	
PSCI 4505	Political System of Russia and Its Neighbors	
PSCI 4555	International Women's Resistance	
PSCI 4605	Politics and Governments of South Asia	
PSCI 4615	Politics and Government of China	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4736	The Middle East in World Affairs	
PSCI 4807	Political Violence	
PSCI 4808	Strategies of Peacebuilding	
PSCI 4878	War, Film, and International Law	
PSCI 4995	Global Study Topics	

Political Theory

Code	Title	Hours
Complete one of the following		*3*
PSCI 4057	Religion and Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4407	Early Political Thought	
PSCI 4417	Modern Political Thought	
PSCI 4427	Law, Politics and Justice	
PSCI 4437	Coercion and the State	
PSCI 4457	American Political Thought	
PSCI 4564	Gender and Politics	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/polisci/undergraduate/).

International Politics and Foreign Policy Undergraduate Certificate

Introduction

Please click here (p. 766) to see Political Science department information.

The International Politics and Foreign Policy certificate for undergraduates allows students to specialize in international politics and foreign policy, engaging topics and methods essential for graduate study in international relations and for successful careers in the field. More broadly, this certificate is useful to students in any discipline who expect to work or study abroad in the future or who plan to work in a field with significant international dimensions, potentially from business and economics to public health and engineering. One of the unique attributes of this certificate is that it dispenses with the traditional and well-worn "capstone", and instead emphasizes independent and experiential learning and coursework in order to best meet the needs of students seeking job-relevant skills and looking to prepare for graduate school.

Program Delivery

- The certificate can be earned through a mix of on-campus and online courses.

Declaring This Certificate

- Any undergraduate admitted to CU Denver in a degree-seeking or non-degree seeking program may pursue this certificate.
- To declare this certificate, students must meet with the Political Science Department advising faculty.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their International Politics and Foreign Policy certificate advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete 12 credit hours from the approved courses.
2. Students must complete six credit hours of upper division (3000 or 4000 level) level courses.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. All courses in this certificate must be taken in residency at CU Denver.

Code	Title	Hours
Complete one of the following required courses:		*3*
PSCI 3022	Political Systems of the World	
or PSCI 3042	World Politics	
or PSCI 4126	Politics, Power, and Profit	
or INTS 2020	Foundations of International Studies	
Complete two of the following elective courses-substitutions may be approved by the program advisor: [1]		*6*
International Politics, Law, and Culture		
PSCI 4002	Topics in Political Science	
PSCI 4105	Comparative Politics: Europe	
PSCI 4115	Third World Politics	
PSCI 4144	Indigenous Political Systems	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4156	The Arab-Israeli Peace Process	
PSCI 4186	East Asia in World Affairs	

PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4216	International Politics: Human Rights	
PSCI 4224	Dictatorships in 21st Century	
PSCI 4225	Democracy and Democratization	
PSCI 4266	International Law	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4280	The Politics of War Law	
PSCI 4505	Political System of Russia and Its Neighbors	
PSCI 4550	The Irish Diaspora	
PSCI 4605	Politics and Governments of South Asia	
PSCI 4615	Politics and Government of China	
PSCI 4726	Seminar on U.S. and China Relations	
PSCI 4736	The Middle East in World Affairs	
Foreign Policy and National Security		
PSCI 3050	Islamophobia	
PSCI 4185	Corruption in the U.S. and Abroad	
PSCI 4226	The United Nations in World Affairs	
PSCI 4236	American Foreign Policy	
PSCI 4237	American National Security	
PSCI 4240	International Security	
PSCI 4280	The Politics of War Law	
PSCI 4286	International Relations: War or Peace?	
PSCI 4437	Coercion and the State	
PSCI 4807	Political Violence	
PSCI 4808	Strategies of Peacebuilding	
PSCI 4878	War, Film, and International Law	
Political Economy, Development, and Inequality		
PSCI 2365	Politics of Climate Change	
PSCI 4001	Theories of Capitalism	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI 4025	Local Governance and Globalization	
PSCI 4115	Third World Politics	
PSCI 4146	Indigenous Politics	
PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI 4186	East Asia in World Affairs	
PSCI 4195	Political Systems of Sub-Saharan Africa	
PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4248	Gender, Development and Globalization	
PSCI 4265	Social Justice And Globalization	
PSCI 4340	Advanced International Political Economy: Global Supply Chain	
PSCI 4365	Global Ecological Crises	
Complete three credit hours from one of the following capstone experiences:		*3*
PSCI 3840	Independent Study: PSCI	
PSCI 3939	Internship	
PSCI 4840	Independent Study: PSCI	
PSCI 4880	Directed Research	
PSCI 4995	Global Study Topics	
Total Hours		**12**

[1] Students are advised to complete elective courses in one of the three thematic pathways.

Students who complete the International Politics and Foreign Policy certificate will build knowledge and skills around the following five learning objectives:

1. Explore international issue areas, central debates, and the politics of specific countries and regions.
2. Analyze actors, institutions, and relationships within and among countries and regions of the world.
3. Apply international relations theories and methods, and use them to evaluate policy interventions and programming in the international arena.
4. Build new solutions to the world's most pressing problems.
5. Develop and refine key intellectual and academic skills, including the ability to use these skills independently and/or in professional contexts: reading, research, writing, critical and analytical thinking.

Labor Leadership Undergraduate Certificate

Introduction

Please click here (p. 766) to see Political Science department information.

The Labor Leadership certificate is meant to develop the next generation of leaders in labor unions and civic organizations focused on labor and related issues of race, class and gender equity. The certificate is particularly relevant to labor union leaders, rank and file members, and community-based organizational staff who desire to receive continuing education regarding labor leadership. The labor leadership certificate will combine academic instruction with field learning and community-based research projects. The program features active partnerships with local labor organizations, such as unions and community-based groups focused on relevant labor, class and race issues (such as immigrant rights groups, workplace gender equity groups, etc.). Certificate students will enhance synergetic learning in the classroom, and enlarge networking opportunities among all students.

Program Delivery

- The certificate can be earned either through our traditional on-campus courses, or entirely through classes offered in a weekend-intensive format in our New Directions program. Students may take classes in either format desired.

Declaring This Certificate

- Any undergraduate admitted to CU Denver in a degree-seeking or non-degree seeking program may pursue this certificate.
- To declare this certificate, students must meet with the Political Science Department advising faculty.

For questions about the Labor Leadership Undergraduate Certificate contact Steve Delcastillo (steve.delcastillo@ucdenver.edu)

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Labor Leadership advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete 12 credit hours from the approved courses.
2. Students must complete six credit hours of upper division (3000 or 4000 level) level courses.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All courses in this certificate must be taken in residency at CU Denver.

Code	Title	Hours
Complete the following required courses:		*6*
PSCI 4535	Labor and Working Class Politics	
PSCI 5550	Labor, Trade Unions and the Global Economy	
Complete two of the following elective courses-substitutions may be approved by the program advisor:		*6*
PSCI 4326	Advanced International Political Economy: Globalization	
PSCI 4914	Community Organizing and Community Development	
PSCI 5424	The Social Economy and Sustainable Development	
PSCI 5434	The Cooperative Movement: Politics and Policy	
PSCI 5548	Labor Law and Collective Bargaining	
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our website.

Middle Eastern Politics Undergraduate Certificate

Introduction

Please click here (p. 766) to see Political Science department information.

The Middle East features often in statements made by politicians, and stories from the region are a constant staple of the media. However, the region is still considered by many to be a "mystery." This perception is in part a result of the misrepresentation of the region and its peoples, in addition to the incessant regional political developments, especially during the current decade. The purpose of this certificate is to provide students with a deeper understanding of the politics of the region that goes beyond stereotypes disseminated by the media and manipulated by political and interest groups. It will introduce students to current research and practice concerning the complex interplay among the different peoples and the states of the Middle East, as well as the interaction between the region and the rest of the world. While the certificate will be issued and managed by the Political Science department, students can take courses from other departments and programs, for instance Geography, History, Modern Languages, Religious Studies and Women and Gender Studies. Graduate courses in the Political Science with a Middle East focus can also count toward the certificate. Such an interdisciplinary approach will expose students to a variety of perspectives on the study of the Middle East. It will also train students to investigate the interconnections among the different aspects of politics in the region.

Program Delivery

- The certificate is earned through our traditional on-campus courses.

Declaring This Certificate

- Any undergraduate admitted to CU Denver in a degree-seeking or non-degree seeking program may pursue this certificate.
- To declare this certificate, students must meet with the Political Science Department advising faculty.
- For questions about the Middle Eastern Politics Undergraduate Certificate contact Dr. Bassem Hassan (Bassem.Hassan@ucdenver.edu (Bassem.Hassan@ucdenver.edu?subject=Middle%20East%20Politics%20Certificate))

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Middle Eastern Politics certificate advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses.
2. Students must complete all courses at the upper-division level (3000 or 4000 level). With the exception ARAB 2120 Intermediate Arabic II.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All of the credit hours for this certificate must be earned at the CU Denver.

Program Restrictions, Allowances and Recommendations

1. Only one course can be an independent study, which must be approved by Political Science Department as the certificate advisor.
2. Students must complete at least two Political Science courses in the certificate.

Code	Title	Hours
Complete one of the following introductory courses:		*3*
HIST 4461	The Modern Middle East	
PSCI 4002	Topics in Political Science (any PSCI section with Middle East as part of the subtitle)	
PSCI 4736	The Middle East in World Affairs	
Complete two of the following elective courses:		*6*
ARAB 2120	Intermediate Arabic II	
GEOG 3150	Middle East	
HIST 4461	The Modern Middle East	
HIST 4462	Islam in Modern History	
PSCI 4002	Topics in Political Science (any PSCI section with Middle East as part of the subtitle)	
PSCI/WGST 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
PSCI 4155	Political Systems of the Middle East and North Africa	
PSCI/ETST 4156	The Arab-Israeli Peace Process	
PSCI 4165/ RLST 3100	Islamic Politics and Culture	
PSCI 3050	Islamophobia	
RLST 3100	Islamic Politics and Culture	
RLST 3120	Islamic Traditions	
PSCI 4736	The Middle East in World Affairs	
PSCI 5610	Seminar: Middle East Politics	
Relevant Independent Study in any Department, if approved by Political Science Faculty Certificate Advisor.		
Complete one of the following capstone courses: [1]		*3*
PSCI/WGST 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	

	PSCI/ETST 4156	The Arab-Israeli Peace Process
	PSCI 4770	Middle East Politics and Society in Film
	PSCI 5610	Seminar: Middle East Politics
Total Hours		**12**

[1] Courses listed in the introductory and capstone sections can apply as electives if they are not used to fulfill the introductory and capstone requirements.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/polisci/certificates/middle-east-politics-certificate/).

Public, Non-Profit and Community Leadership Undergraduate Certificate

Introduction

Please click here (p. 766) to see Political Science department information.

The CU Denver Political Science Department's Public, Non-Profit and Community Leadership Certificate engages students in a focused curriculum in local public leadership, and in the community organizing and development field, including field placements in internships with local community partners. The certificate is tailored to meet the needs of individuals in public and non-profit positions that require development of their leadership competencies and for individuals in informal community leadership positions who want to build their knowledge, skills, and effectiveness.

The program curriculum is anchored around the study and practice of local civic engagement, especially in traditionally marginalized communities. Students will be connected to meaningful work and networking opportunities in local government or in community settings, through community-based coursework, professional internships and service-learning opportunities. The certificate program provides critical education and effective skills-based training for students seeking careers in local government, in non-profit organizations, or in community organizing and development work. Students will be prepared to become change agents in their communities, while developing possible career paths in community-based advocacy/service organizations, public agencies, or international development work.

The certificate is open to non-degree seeking students (with or without an undergraduate degree) as well as students formally pursuing an undergraduate degree at CU Denver. The Certificate can be earned as a stand-alone University certificate, or it can be applied to a current or future degree program. Non-degree seeking students who successfully complete the certificate program would be allowed to transfer in the credits received in the certificate program to complete the Bachelor's Degree in Political Science.

Program Delivery

- The certificate can be earned either through our traditional on-campus courses, or entirely through classes offered in a weekend intensive format in our New Directions program. Students may take classes in either format desired.

Admissions and Declaring This Certificate

- Any current or potential student wishing to declare this certificate should schedule a certificate advising appointment with either the Director of the New Directions program or with the Departmental Undergraduate Advisor, in order to register their intent to pursue the Public, Non-Profit and Community Leadership Certificate and to develop a curriculum plan.

For questions contact Steve Delcastillo (steve.delcastillo@ucdenver.edu) or Karen Breslin (karen.breslin@ucdenver.edu)

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Public, Non-Profit and Community Leadership Undergraduate Certificate advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete 15 credit hours in approved courses.
2. Students must complete a minimum of six upper division (3000 level and higher) credit hours from approved coursework.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. All credits must be taken in residence at CU Denver.

Code	Title	Hours
Complete the following program requirements:		**15**
Complete the following required course:		*3*
PSCI 4914	Community Organizing and Community Development	
Complete one of the following Field Placement courses:		*3*
PSCI 3914	The Urban Citizen	
PSCI 3939	Internship	
PSCI 4934	CU at the Capitol	
PSCI 4944	CU in the City	
Complete nine credit hours from the following Public and Community Leadership elective courses:		*9*
PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 4002	Topics in Political Science [1]	
PSCI 4025	Local Governance and Globalization	
PSCI 4074	Urban Politics, Planning, and Development	
PSCI 4075	Gentrification and Social Equity	
PSCI 4084	Local Government and Administration	
PSCI 4124	Denver Politics	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4248	Gender, Development and Globalization	
PSCI 4265	Social Justice And Globalization	
PSCI 4274	Conflict Resolution and Public Consent Building	
PSCI 4414	Non-Profits and Social Change	
PSCI 4535	Labor and Working Class Politics	
PSCI 4555	International Women's Resistance	
PSCI 4840	Independent Study: PSCI [1]	
PSCI 5424	The Social Economy and Sustainable Development	

PSCI 5434	The Cooperative Movement: Politics and Policy
PSCI 5548	Labor Law and Collective Bargaining

[1] PSCI 4002 Topics in Political Science and PSCI 4840 Independent Study: PSCI, can only be applied with advisor approval.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/newdirections/certificates/graduate-certificate-public-non-profit-community-leadership-certificate/).

Psychology

Chair: Peter S. Kaplan
Program Assistant: Kimberly Hill
BA and Psychology Minor Undergraduate Advisor: Mitchell Handelsman
BS and Behavioral and Cognitive Neuroscience Minor Undergraduate Advisor: David Albeck
Director of Undergraduate Studies: David Albeck
Office: North Classroom, 5002
Telephone: 303-315-7050
Fax: 303-315-7072

Overview

Psychology is the scientific study of behavior, consisting largely of the following major areas of study: experimental psychology, biopsychology, animal behavior, clinical psychology, developmental psychology, social psychology, cognitive psychology, personality, industrial/organizational psychology and abnormal psychology. The requirements for the major are designed to introduce the student to the spectrum of Psychology, including an early exposure to research methods and statistics.

The Psychology major prepares students for employment and for graduate study in Psychology and related fields. The Psychology department also offers a PhD in Clinical Health Psychology.

Honors

There are two ways in which a student graduating with a Bachelor of Arts or Bachelor of Science degree in Psychology can graduate with honors. First, the College of Liberal Arts and Sciences (CLAS) awards the honor of graduating "with distinction (p. 380)."

The second form of honors, "Latin honors," is awarded by individual departments within CLAS, including psychology. The CU Denver Department of Psychology has approved a very rigorous set of requirements for Latin honors, also based on overall GPA. Level of Latin Honors will be awarded to both Bachelor of Arts and the Bachelor of Science graduates according to the following criteria:

- **Summa Cum Laude: 3.9 - 4.0**
- **Magna Cum Laude: 3.75 - 3.89**
- **Cum Laude: 3.6 - 3.74**

Students who wish to participate in Psychology research, please see the Gardner Psychology Research Scholar opportunity for the Bachelor of Arts (p. 810) or the Bachelor of Science (p. 812).

Curriculum Goals and Essential Learning Outcomes

Goal 1: Knowledge Base of Psychology

Students will recognize, explain, and distinguish the major concepts, theoretical perspectives, empirical findings, and historical trends in Psychology.

Essential Learning Outcome: The development of Knowledge of Human Cultures and the Physical and Natural World

Goal 2: Research Methods in Psychology

Students will demonstrate the statistical, organizational, writing, and analytical skills necessary to interpret and conduct meaningful and valid research in Psychology.

Essential Learning Outcomes: The development of Intellectual and Practical Skills, including Quantitative Literacy, Information Literacy, and Inquiry and Analysis skills.

Goal 3: Critical Thinking Skills

Students will use skeptical inquiry and scientific thinking skills to interpret and solve problems related to behavior and mental processes.

Essential Learning Outcomes: The development of Intellectual and Practical Skills, including Critical Thinking skills.

Goal 4: Application of Psychology

Students will apply psychological principles to solve personal, social, and/or organizational problems.

Essential Learning Outcomes: The development of Intellectual and Practical Skills, including Problem Solving skills.

Goal 5: Values in Psychology

Students will evaluate evidence, tolerate ambiguity, act ethically, recognize and respect diversity, and/or reflect other values that are the underpinnings of Psychology as a discipline.

Essential Learning Outcome: The development of Personal and Social Responsibility, including Ethical Reasoning and Intercultural Knowledge and Competence.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/psychology/) catalog to read about our graduate programs.

Programs

- Psychology, BA (p. 805)
- Psychology, BS (p. 807)
- Psychology, BA, Gardner Psych Research Scholar (p. 810)
- Psychology, BS, Gardner Psych Research Scholar (p. 812)
- Behavioral Cognitive Neuroscience Minor (p. 815)
- Psychology Minor (p. 816)

Faculty

Professors:

Elizabeth Sandlin Allen, PhD, University of North Carolina at Chapel Hill
Richard Allen, PhD, University of North Carolina at Chapel Hill
James Grigsby, PhD, University of Colorado, Boulder
Mitchell M. Handelsman, PhD, University of Kansas
Peter S. Kaplan, PhD, Indiana University
Kevin S. Masters, PhD, Brigham Young University

Associate Professors:

David Albeck, PhD, University of Colorado, Boulder
Sondra Bland, PhD, University of Texas
Benjamin Greenwood, PhD, University of Colorado, Boulder
Kristin Kilbourn, PhD, University of Miami
Erik Oleson, PhD, Wake Forest University
Krista W. Ranby, PhD, Arizona State University
Jonathan Schaffer, PhD, St. John's University
Amy Wachholtz, PhD, Bowling Green University
Jason Watson, PhD, Washington University
Michael Zinser, PhD, University of Wisconsin, Madison

Assistant Professors:

Carly Leonard, PhD, Johns Hopkins University
Melissa Simone, Ph.D., Utah State University

Professor, Clinical Teaching Track:

Joan Bihun, PhD, Wayne State University

Associate Professor, Clinical Teaching Track:

Athena Baca-Chieza, PsyD, Chicago School of Professional Psychology
Kevin Everhart, PhD, University of South Carolina
Vivian Shyu, PhD, University of Denver

Senior Instructors:

Bethann Bierer, PhD, University of Denver

Instructors:

Christina Collins, Ph.D., Meridian University
Laurel Hyslop, Ph.D., Syracuse University
Paula Schmidtlein, Ph.D., University of Denver

Emeritus Professors:

Rick M. Gardner, PhD, University of Nevada
Barbara Walker, PhD, The Ohio State University

Psychology (PSYC)

PSYC 1000 - Introduction to Psychology I (3 Credits)
Introduces the scientific study of behavior, including an overview of the biological basis of behavior, sensation or perception, states of consciousness, learning and memory, thinking and language, intelligence, motivation and emotion. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

PSYC 1005 - Introduction to Psychology II (3 Credits)
Introduces the scientific study of behavior, including an overview of the history of psychology, development, personality, psychological disorders, therapy, health psychology and social behavior. PSYC 1000 is not a prerequisite for this course. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

PSYC 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PSYC 2050 - Improving Memory (2 Credits)
Applies psychological principles of memory function and process to everyday settings and experiences. Covers topics such as how memory works, principles of memory improvement, and strategies for effective learning. Max hours: 2 Credits.
Grading Basis: Letter Grade

PSYC 2060 - Psychology Applied to Everyday Life (3 Credits)
A primer in psychological principles applied to everyday situations. Covers topics such as learning, stress and health, attraction and love, and personality. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 2090 - Statistics and Research Methods (4 Credits)
Introduces statistics and research methods in the field of psychology. Note: Intended for those who plan to major in psychology. Completion of college algebra or equivalent is recommended. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 2205 - Lifespan Developmental Psychology for Health Majors (3 Credits)
This course will examine the normative physical, cognitive and socio-emotional changes and milestones that occur through the human lifespan highlighting health-related issues at each stage. Prereq: PSYC 1000 or PSYC 1005 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 or 1005 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 2220 - Biological Basis of Behavior (3 Credits)
Introduces the biological basis of behavior. This course will feature concepts like neurons, synaptic and hormonal transmission, and physiological set-points. Behavior of simple (invertebrate) and complex organisms (vertebrates) will be related to the activity of specific brain neural networks. Prereq: PSYC 1000 or BIOL 2020 (BIOL 2051) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2
Grading Basis: Letter Grade
Prereq: PSYC 1000 or BIOL 2020 (BIOL 2051) with a C- or higher
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

PSYC 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of PSYC courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of PSYC courses with a 2.75 GPA in PSYC courses

PSYC 2990 - Topics in Psychology (1-3 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSYC 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Max hours: 3 Credits. Cross-listed with PBHL 3050 and ECON 3050.
Grading Basis: Letter Grade

PSYC 3090 - Research Methods in Psychology (3 Credits)
Covers principles of experimental methodology in Psychology. Includes active participation in data collection and interpretation, presentation of results, evaluation of scientific literature, scientific writing and advanced statistical concepts as they relate to the field of Psychology. Prereq: PSYC 1000, 1005 and 2090 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, PSYC 1005, and PSYC 2090 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3144 - Human Cognition (3 Credits)
Studies information processing in humans, with emphasis on memory, thinking and language. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3145 - Industrial and Organizational Psychology (3 Credits)
Surveys the fields of industrial and organizational psychology. These fields apply psychological principles to improving productivity and satisfaction in the workplace. Topics include motivation, leadership, group processes, team functioning, occupational health, selection and training of employees, and performance management. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall.

PSYC 3205 - Human Development I: Child Psychology (3 Credits)
Studies human development covering birth, infancy, toddler, preschool and school-aged child. Covers biological, cognitive and social processes. Prereq: PSYC 1000 and PSYC 1005 or PSYC 3215 with a grade of C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 1005 or PSYC 3215 with a grade of C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3215 - Human Development II: Adolescence and Adulthood (3 Credits)
Study of human development from adolescence through adulthood and aging. Covers biological, cognitive, and social processes. Prereq: PSYC 1000 and PSYC 1005 or PSYC 3205. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 1005 or PSYC 3205 with a grade of C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3222 - Principles of Learning and Behavior (3 Credits)
Introduces the scientific study of learning and behavior, focusing on "Behaviorism." Principles of operant and classical conditioning are discussed. A particular emphasis is placed on the relevance and application of these principles to understanding human behavior and psychopathology. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3235 - Human Sexuality (3 Credits)
Examines the physiological, psychological, and social psychological bases of human sexuality. Research on the range of sexual behaviors, individual sexual response, sexual development, sexual dysfunction, and variants of sexual orientation. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3254 - Introduction to Animal Behavior (3 Credits)
Surveys the behavior of nonhuman animals, emphasizing the evolution through natural selection. One semester of general biology, biological anthropology, or other course emphasizing evolutionary perspective is strongly recommended as preparation for optimal student success. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSYC 3262 - Health Psychology (3 Credits)
An overview of the scientific study of attitudes, behaviors, and personality variables related to health and illness. Emphasis is on the interaction of biological, psychological, and social factors that cause illness and influence its treatment and prevention. Prereq: PSYC 1000 and 2220 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.

PSYC 3263 - Hormones and Behavior (3 Credits)
The hormonal regulation of behavior will be the primary focus of this course. Topics include: hormonal basis of sexual differentiation and behavioral differences, parental behavior, biological rhythms, aggression, mood and stress. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5263. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Spring.

PSYC 3264 - Exercise, Brain and Behavior (3 Credits)
This course explores the impact of physical activity status-being sedentary or physically active-on brain function and behavior. Topics include effects of exercise on cognitive function, mood disorders, stress, anxiety, sleep and drug addiction. Emphasis will be placed on understanding the neurobiological mechanisms by which exercise impacts behavior. Students who have received credit for this topic listed under PSYC 3600 may not receive credit for this course. Prereq: PSYC 1000 and PSYC 2220 with a C- or higher. Term offered: fall. Cross-listed with PSYC 5264. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3265 - Drugs, Brain and Behavior (3 Credits)
Explores the pharmacological, biological, and behavioral basis of drug effects. Topics include mechanisms of drug action, brain reward pathways, role of environment and history on drug effects, and the impact of science on drug abuse and medication development. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5265. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3305 - Abnormal Psychology (3 Credits)
This course applies a scientific approach to the examination of the symptoms, etiologies, and treatments of mental illnesses, including disorders of mood, anxiety, stress, addictions and those seen in childhood and older age. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3385 - Psychology of Mindfulness (3 Credits)
This course will explore significant psychological, neurological, historical, societal and cultural aspects of mindfulness. It will integrate this current knowledge with more traditional aspects of the concept through classroom activities, guest lecturers, projects and field trips. Prereq: PSYC 1000 or 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 or 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3405 - Family Psychology (3 Credits)
Overview of theory and research pertaining to marital and family structure, functioning and dynamics. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3415 - Experimental Social Psychology (3 Credits)
Surveys the field of Social Psychology, the study of the way in which cognitions, emotions, and behaviors are influenced by the presence, or perceived presence, of others. Heavily focuses on experimentation and experimental methods within the field of Social Psychology. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3460 - Military Clinical Psychology (3 Credits)
This course focuses on clinical psychological issues facing service members, veterans, and military families. Topics include contemporary military culture, challenges of the military lifestyle/deployment/reintegration, specific types of military trauma, psychological issues of PTSD, TBI, depression, substance abuse, and suicidality, and psychological interventions for these issues. Prereq: PSYC 1005 with a C- or higher. Students will not earn credit for this course if they have already earned credit for PSYC 3600 with a similar topic title. Max hours: 3 Credits.
Grading Basis: Letter Grade
PSYC 1005 with a C- or higher.

PSYC 3505 - Psychology and the Law (3 Credits)
Examines the legal and extralegal applications of psychology, such as assessment of insanity and competence, psychologists as expert witnesses, accuracy of eyewitness accounts, and issues relating to employment discrimination. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3600 - Topics in Psychology (1-3 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

PSYC 3611 - Psychology of Women (3 Credits)
Reviews psychological theories and research of women's social, cultural, emotional and behavioral experience. Examines the sociocultural context of women's experience and explores women's socialization, developmental issues, cognitive abilities and achievement motivation, personality variables, stereotypes, psychological disorders, victimization, intimacy and sexuality. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Summer.

PSYC 3612 - Domestic Abuse (3 Credits)
Examines the nature and extent of domestic violence. Personal characteristics and dynamics that contribute to spouse abuse are reviewed. Theories and research in the general field of family violence, victims' and perpetrators' treatment, and child abuse are discussed. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall.

PSYC 3615 - Positive Psychology (3 Credits)
This course provides an introduction to the science of positive traits, subjective experiences and institutions. It focuses on the empirical study of the factors that enable humans to flourish, develop resilience, mature and master life's challenges. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3724 - Developmental Neuroscience (3 Credits)
Explores the biological influences on the development of brain and behavior. Emphasis is on the evolution and development, the role of experience in prenatal and postnatal development, the ontogeny of sensory systems, learning and memory, and the biological bases of language acquisition. Prereq: PSYC 2220 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3810 - Neuropsychology (3 Credits)
Brain organization and function and its relationship to human memory, language, perception, and other cognitive abilities. Covers the application of clinical neuropsychology to working with individuals that have neurological disorders. Prereq: PSYC 1000 and 2220 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall, Spring.

PSYC 3822 - Aging, Brain and Behavior (3 Credits)
Examines the aging process, behavioral changes during senescence and the accompanying changes in the aged brain. Changes that are part of healthy aging are studied, as will age-related brain disorders. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5822. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3832 - Neural Basis of Learning (3 Credits)
Survey of advances in neuroscience that further the understanding of how neurons within our brains are modified by experience and thus influence subsequent behavior. Includes discussions of how these mechanisms contribute to various psychopathologies. Prereq: PSYC 1000 and 2220 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have Junior standing, have completed at least 12 hours in PSYC courses with a 2.0 GPA in PSYC courses and must work with Experiential Learning Center advising to complete a course contract and gain approval to enroll. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing and 12 hours of PSYC courses with a 2.0 GPA in PSYC courses
Typically Offered: Fall, Spring, Summer.

PSYC 4054 - Behavioral Neuroscience (3 Credits)
The morphological, neurochemical and physiological bases of behavior. Emphasis is on structure and function of the brain. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 4090 - Research Design and Development (3 Credits)
This advanced writing and research methods course is designed to help students develop independent research ideas into formal products, such as a thesis proposal, grant application, presentation, and study protocols. Prereq: PSYC 3090 and instructor permission. Cross-listed with MARC 4090. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 3090.
Typically Offered: Fall, Spring.

PSYC 4101 - Applied Statistics Using SAS and SPSS I (3 Credits)
Teaches the practical statistical tools social scientists use to analyze real-world problems. It is split into four modules, each taught by a different instructor. The first module introduces SAS and SPSS; modules 2-4 are problem-based and cover topics such as ANOVA, multivariate regression, and cluster analysis. Students are recommended to have taken and completed at least one statistics course, at any level, as preparation for optimal success. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 4102 - Applied Statistics Using SAS and SPSS II (3 Credits)
Students use the skills they learned in the previous semester to analyze a social issue of their choosing and present their findings. Note: A continuation of PSYC 4101. In addition to lectures, weekly one-on-one meetings between faculty and students are required. Prereq: PSYC 4101 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 4101 with a C- or higher

PSYC 4111 - Senior Seminar in Psychology: Career Capstone (3 Credits)
This course provides a focused integration of the skills and knowledge gained through the psychology major curriculum. As a capstone course, it will prepare students to apply what they have learned to their professional careers. Prereq: PSYC 3090 with a grade of C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PSYC 3090 with a grade of C- or higher.
Typically Offered: Spring.

PSYC 4164 - Psychology of Perception (3 Credits)
Studies sensory processes and perceptual variables. Covers processes related to vision, audition, gustation and olfaction. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5164. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.

PSYC 4455 - Theories of Personality (3 Credits)
An in-depth look at several major theories of personality, including those from psychodynamic, behavioral, and humanistic schools of thought. Students are required to think actively and abstractly, and communicate their ideas in papers and classroom contributions. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Summer.

PSYC 4485 - Psychology of Cultural Diversity (3 Credits)
Studies diversity in the development of the individual across Asian, Black, Hispanic, and Native American cultures. The experience of self, role of the family, expression of emotions, and psychology of prejudice are emphasized. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

PSYC 4500 - Psychotherapy (3 Credits)
Overview of the major systems of psychotherapy, including psychoanalysis, person-centered therapy, family therapy, cognitive or behavioral approaches, and relationships among the various approaches. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher

PSYC 4511 - History of Psychology (3 Credits)
Development of psychological theories since 500 B.C. Schools of psychology and their adherents. Readings of primary and secondary sources. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher or admitted and enrolled in the Clinical Health Psychology PhD program (PSYH-PHD). Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher or admitted and enrolled in the Clinical Health Psychology PhD program (PSYH-PHD).
Typically Offered: Fall, Spring, Summer.

PSYC 4680 - Behavioral & Biomedical Sciences Research Seminar (1-2 Credits)
Introduces research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: permission of the instructor. Cross-listed with MARC 4680. Term offered: fall, spring. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

PSYC 4681 - Behavioral & Biomedical Sciences Research Seminar II (1-2 Credits)
Continuation of research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: PSYC/MARC 4680 and permission of the instructor. Cross-listed with MARC 4681. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PSYC 4680 or MARC 4680 and instructor permission.

PSYC 4730 - Clinical Psychology: Ethics and Issues (3 Credits)
An in-depth exploration of the values and ideas that guide professional practice in psychology, including professional codes of conduct and philosophical ethical principles. Topics include confidentiality, informed consent, competence, integrity and respect. Prereq: 1000, 1005, 2090, 2220 and 3090 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher
Typically Offered: Spring.

PSYC 4780 - Behavioral & Biomedical Sciences Research: Ethics & Issues (3 Credits)
Students will critically review and analyze some of the major ethical and policy issues that arise during the conduct of basic and applied behavioral research. Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher or instructor permission. Term offered: fall. Cross-listed with MARC 4780. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher
Typically Offered: Fall.

PSYC 4803 - Principles of Psychological Testing (3 Credits)
Principles underlying construction, validation, and use of tests of ability, intelligence, and personality and of attitude surveys. Covers statistical topics such as content and construct validity, item analysis, and reliability analysis. Students are recommended to have taken and completed at least one statistics course, at any level, as preparation for optimal success. Cross-listed with PSYC 5803. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 4840 - Independent Study: PSYC (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PSYC 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PSYC 4939 - Internship (1-3 Credits)
Prereq: Students must have Junior standing, have completed at least 12 hours in PSYC courses with a 2.0 GPA in PSYC courses and must work with Experiential Learning Center advising to complete a course contract and gain approval to enroll. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing and 12 hours of PSYC courses with a 2.0 GPA in PSYC courses
Typically Offered: Fall, Spring, Summer.

PSYC 4990 - Topics in Psychology (1-3 Credits)
Advanced study of special topics to be selected by the instructor. May be repeated for credit. Prereq: Permission of instructor. Cross-listed with PSYC 5990. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Psychology, BA

Introduction

Please click here (p. 799) to see Psychology department information.

The College of Liberal Arts and Sciences also offers a Psychology BS (p. 807) degree.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus and online program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 37 PSYC credit hours.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
3. Students must complete a minimum of 16 upper division (3000-level and above) PSYC credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. PSYC 3939 Internship does **not** count toward the 37 hour minimum or the 16 hour upper division requirement, but it does count as elective psychology credit.
2. PSYC 3600 Topics in Psychology: See your advisor to determine if they count as Group A or Group B courses.
3. Many courses have prerequisites. Refer to the course descriptions for prerequisite information.
4. Students with transfer credit for PSYC1005 that was awarded zero credits will need to take an additional three credit Psychology Elective course to reach the minimum credit hours required for the Psychology Major.

Code	Title	Hours
Complete all of the following required courses:		*19*
PSYC 1000	Introduction to Psychology I	
PSYC 1005	Introduction to Psychology II	
PSYC 2090	Statistics and Research Methods	
PSYC 2220	Biological Basis of Behavior	
PSYC 3090	Research Methods in Psychology	
PSYC 4511	History of Psychology	
Complete one of the following Group A elective courses:		*3*
PSYC 3144	Human Cognition	
PSYC 3222	Principles of Learning and Behavior	
Complete one of the following Group A elective courses not already completed:		*3*
BIOL 3104	Behavioral Genetics	
PSYC 3144	Human Cognition	
PSYC 3222	Principles of Learning and Behavior	
PSYC 3254	Introduction to Animal Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3264	Exercise, Brain and Behavior	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3385	Psychology of Mindfulness	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
PSYC 3822	Aging, Brain and Behavior	
PSYC 3832	Neural Basis of Learning	
PSYC 4054	Behavioral Neuroscience	
PSYC 4164	Psychology of Perception	
Complete two of the following Group B elective courses:		*6*
PSYC 3205	Human Development I: Child Psychology	
PSYC 3305	Abnormal Psychology	
PSYC 3415	Experimental Social Psychology	
Complete one of the following Group B elective courses not already completed:		*3*
PSYC 3145	Industrial and Organizational Psychology	
PSYC 3205	Human Development I: Child Psychology	
PSYC 3215	Human Development II: Adolescence and Adulthood	
PSYC 3235	Human Sexuality	
PSYC 3305	Abnormal Psychology	
PSYC 3405	Family Psychology	
PSYC 3415	Experimental Social Psychology	
PSYC 3460	Military Clinical Psychology	
PSYC 3505	Psychology and the Law	
PSYC 3611	Psychology of Women	
PSYC 3612	Domestic Abuse	
PSYC 3615	Positive Psychology	
PSYC 4111	Senior Seminar in Psychology: Career Capstone	
PSYC 4455	Theories of Personality	
PSYC 4485	Psychology of Cultural Diversity	

PSYC 4500	Psychotherapy	
PSYC 4730	Clinical Psychology: Ethics and Issues	
PSYC 4780	Behavioral & Biomedical Sciences Research: Ethics & Issues	
Complete one additional elective course from either Group A or Group B not already completed.		*3*
Total Hours		**37**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/psychology/learning-goals/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Psychology, BS

Introduction

Please click here (p. 799) to see Psychology department information.

The College of Liberal Arts and Sciences also offers a Psychology BA (p. 805) degree.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 54 credit hours, including a minimum of 31 PSYC credit hours and a minimum of 23 credit hours in ancillary course work.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
3. Students must complete a minimum of 16 upper division (3000-level and above) PSYC credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. An experiential learning component is required and must be approved by the Bachelor of Science academic advisor. To fulfill the experiential learning requirement, some options have a minimum overall GPA of 2.5 or higher. Fulfilling this requirement with a project outside of the Psychology Department requires prior approval by the Bachelor of Science academic advisor. Independent study or internship credit hours taken outside of the Psychology Department will not count as Psychology credit hours. PSYC 4111 Senior Seminar in Psychology: Career Capstone, or PSYC 3939 Internship, can fulfill this requirement, and student does not need 2.5 GPA
2. Successful (final grade of B or better) completion of PSYC 4680 Behavioral & Biomedical Sciences Research Seminar, PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II and PSYC 4780 Behavioral & Biomedical Sciences Research: Ethics & Issues fulfills the experiential learning requirement for the Bachelor of Science in Psychology dept core graduation requirement. It is required for students to have instructor permission to enroll in both PSYC 4680 Behavioral & Biomedical Sciences Research Seminar and PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II
3. Students with transfer credit for PSYC1005 that was awarded zero credits will need to take an additional three credit Psychology Elective course to reach the minimum credit hours required for the Psychology Major.

Psychology Major Course Requirement

Code	Title	Hours
Complete all of the following required courses:		*19*
PSYC 1000	Introduction to Psychology I	
PSYC 1005	Introduction to Psychology II	
PSYC 2090	Statistics and Research Methods	
PSYC 2220	Biological Basis of Behavior	
PSYC 3090	Research Methods in Psychology	
PSYC 4054	Behavioral Neuroscience	
Complete two of the following Group A elective courses		*6*
BIOL 3104	Behavioral Genetics	
PSYC 3222	Principles of Learning and Behavior	
PSYC 3254	Introduction to Animal Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3264	Exercise, Brain and Behavior	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
PSYC 3822	Aging, Brain and Behavior	
PSYC 3832	Neural Basis of Learning	
PSYC 4164	Psychology of Perception	
Complete one of the following Group B elective courses:		*3*
PSYC 3205	Human Development I: Child Psychology	
PSYC 3305	Abnormal Psychology	
PSYC 3415	Experimental Social Psychology	
Complete required ancillary coursework from Biology and Chemistry:		*23*
Biology (p. 809)		
Chemistry (p. 809)		
Upper Division Biology/ Chemistry electives (p. 809)		
Complete 3 credit hours of Experiential Learning coursework: [1]		*3*
PSYC 3939	Internship	
PSYC 4111	Senior Seminar in Psychology: Career Capstone	
PSYC 4680 & PSYC 4681 & PSYC 4780	Behavioral & Biomedical Sciences Research Seminar and Behavioral & Biomedical Sciences Research Seminar II and Behavioral & Biomedical Sciences Research: Ethics & Issues	
PSYC 4840	Independent Study: PSYC	
PSYC 4880	Directed Research	
Total Hours		**54**

[1] Students should consult with the BS advisor to choose the best option.

Registration in PSYC 3939 Internship requires permission of instructor, meeting minimum grade requirements and approval of Experiential Learning Center. Registration in PSYC 4840 Independent Study: PSYC and PSYC 4880 Directed Research requires permission of instructor, meeting minimum grade requirements and approval of the CLAS advising office.

It is required for students to have instructor permission to enroll in both PSYC 4680 Behavioral & Biomedical Sciences Research Seminar and PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II

Successful (final grade of B or better) completion of PSYC 4680 Behavioral & Biomedical Sciences Research Seminar, PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II and PSYC 4780 Behavioral & Biomedical Sciences Research: Ethics & Issues fulfills the experiential learning requirement for the Bachelor of Science in Psychology dept core graduation requirement.

Biology

Code	Title	Hours
Take the following:		*8*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	

Chemistry

Code	Title	Hours
Take the following:		*9*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	

Upper Division Biology/ Chemistry Electives

Code	Title	Hours
Take two of the following upper division level ancillary elective courses:		*6*
BIOL 3225	Human Physiology	
BIOL 3244	Human Anatomy	
BIOL 3445	Introduction to Evolution	
BIOL 3611	General Cell Biology	
BIOL 3621	Introduction to Immunology	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 3832	General Genetics	
BIOL 4134	Human Genetics	
BIOL 4165	Neurobiology	
CHEM 3810	Biochemistry	
CHEM 4810	General Biochemistry I	
CHEM 4820	General Biochemistry II	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/psychology/learning-goals/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Psychology, BA, Gardner Psych Research Scholar

Introduction

Please click here (p. 799) to see Psychology department information.

The College of Liberal Arts and Sciences also offers a Gardner Psychology Research Scholars BS (p. 812) degree.

The Gardner Psychology Research Scholars Program consists of a rigorous set of criteria centered around a research project working with a Psychology faculty mentor.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Secure approval from the Psychology Department Gardner Program Director.
- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 43 credit hours with a minimum of 37 PSYC credit hours.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum of B (3.0) in the 3 Behavioral & Biomedical Sciences Research courses and must achieve a minimum cumulative major GPA of 2.5.. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
3. Students must complete a minimum of 16 upper division (3000-level and above) PSYC credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. PSYC 3939 Internship does **not** count toward the 43 hour minimum or the 16-hour upper-division requirement, but it does count as elective psychology credit.
2. PSYC 3600 Topics in Psychology: See your advisor to determine if they count as Group A or Group B courses.
3. Many courses have prerequisites. Refer to the course descriptions for prerequisite information.
4. Students with transfer credit for PSYC1005 that was awarded zero credits will need to take an additional three credit Psychology Elective course to reach the minimum credit hours required for the Psychology Major.

Code	Title	Hours
Complete all of the following required courses:		*19*
PSYC 1000	Introduction to Psychology I	
PSYC 1005	Introduction to Psychology II	
PSYC 2090	Statistics and Research Methods	
PSYC 2220	Biological Basis of Behavior	
PSYC 3090	Research Methods in Psychology	
PSYC 4511	History of Psychology	
Complete one of the following Group A elective courses:		*3*
PSYC 3144	Human Cognition	
PSYC 3222	Principles of Learning and Behavior	
Complete one of the following Group A elective courses, not already completed:		*3*
BIOL 3104	Behavioral Genetics	
PSYC 3144	Human Cognition	
PSYC 3222	Principles of Learning and Behavior	
PSYC 3254	Introduction to Animal Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3264	Exercise, Brain and Behavior	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3385	Psychology of Mindfulness	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
PSYC 3822	Aging, Brain and Behavior	
PSYC 3832	Neural Basis of Learning	
PSYC 4054	Behavioral Neuroscience	
PSYC 4164	Psychology of Perception	
Complete two of the following Group B elective courses:		*6*
PSYC 3205	Human Development I: Child Psychology	
PSYC 3305	Abnormal Psychology	
PSYC 3415	Experimental Social Psychology	
Complete one of the following Group B elective courses, not already completed:		*3*
PSYC 3145	Industrial and Organizational Psychology	
PSYC 3205	Human Development I: Child Psychology	
PSYC 3215	Human Development II: Adolescence and Adulthood	

PSYC 3235	Human Sexuality	
PSYC 3305	Abnormal Psychology	
PSYC 3405	Family Psychology	
PSYC 3415	Experimental Social Psychology	
PSYC 3460	Military Clinical Psychology	
PSYC 3505	Psychology and the Law	
PSYC 3611	Psychology of Women	
PSYC 3612	Domestic Abuse	
PSYC 3615	Positive Psychology	
PSYC 4111	Senior Seminar in Psychology: Career Capstone	
PSYC 4455	Theories of Personality	
PSYC 4500	Psychotherapy	
PSYC 4730	Clinical Psychology: Ethics and Issues	
Complete one additional elective course from either Group A or Group B not already completed.		*3*
Complete Gardner Psychology Research Requirements: [1]		*6*
PSYC/MARC 4680	Behavioral & Biomedical Sciences Research Seminar [2]	
PSYC/MARC 4681	Behavioral & Biomedical Sciences Research Seminar II [3]	
PSYC/MARC 4780	Behavioral & Biomedical Sciences Research: Ethics & Issues [2]	
Total Hours		**43**

1 Students must earn a minimum grade of B or better in all of the following courses. It is required for students to have instructor permission to enroll in both PSYC 4680 Behavioral & Biomedical Sciences Research Seminar and PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II

2 Take in the Fall.

3 Take in the Spring.

Additional Research Requirements

• The faculty mentor will work with students to guide fulfillment of these co-curricular requirements

- begin this course of study with at least 2 semesters remaining at CU Denver before graduation
- find a CU Denver Psychology faculty member who will mentor this project
- devote a minimum of 180 hours of work on this research project, completed during two semesters or more
- write a scientific paper describing the research
- present the results in an oral format
- present the results in poster format

To learn more about the Student Learning Outcomes for this program, please visit our website.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Psychology, BS, Gardner Psych Research Scholar

Introduction

Please click here (p. 799) to see Psychology department information.

The College of Liberal Arts and Sciences also offers a Gardner Psychology Research Scholars BA (p. 810) degree.

The Gardner Psychology Research Scholars Program consists of a rigorous set of criteria centered around a research project working with a Psychology faculty mentor.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Secure approval from Psychology Department Gardner Program Director.
- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 57 credit hours, including a minimum of 28 PSYC credit hours and a minimum of 23 credit hours in ancillary course work.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum of B (3.0) in the 3 Behavioral & Biomedical Sciences Research courses and must achieve a minimum cumulative major GPA of 2.5. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
3. Students must complete a minimum of 16 upper division (3000-level and above) PSYC credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. An experiential learning component is required and must be approved by the Bachelor of Science academic advisor. To fulfill the experiential learning requirement a student must have a minimum overall GPA of 2.5 or higher. Fulfilling this requirement with a project outside of the Psychology Department requires prior approval by the Bachelor of Science academic advisor. Independent study or internship credit hours taken outside of the Psychology Department will not count as Psychology credit hours.
2. Successful (final grade of B or better) completion of PSYC 4680 Behavioral & Biomedical Sciences Research Seminar, PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II and PSYC 4780 Behavioral & Biomedical Sciences Research: Ethics & Issues fulfills the experiential learning requirement for the Bachelor of Science in Psychology department core graduation requirement. It is required for students to have instructor permission to enroll in both PSYC 4680 Behavioral & Biomedical Sciences Research Seminar and PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II
3. Students with transfer credit for PSYC1005 that was awarded zero credits will need to take an additional three credit Psychology Elective course to reach the minimum credit hours required for the Psychology Major.

Code	Title	Hours
Complete all of the following required courses:		*19*
PSYC 1000	Introduction to Psychology I	
PSYC 1005	Introduction to Psychology II	
PSYC 2090	Statistics and Research Methods	
PSYC 2220	Biological Basis of Behavior	
PSYC 3090	Research Methods in Psychology	
PSYC 4054	Behavioral Neuroscience	
Complete two of the following Group A elective courses:		*6*
BIOL 3104	Behavioral Genetics	
PSYC 3222	Principles of Learning and Behavior	
PSYC 3254	Introduction to Animal Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3264	Exercise, Brain and Behavior	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3810	Neuropsychology	
PSYC 3822	Aging, Brain and Behavior	
PSYC 3832	Neural Basis of Learning	
PSYC 4164	Psychology of Perception	
Complete one of the following Group B elective courses:		*3*
PSYC 3205	Human Development I: Child Psychology	
PSYC 3305	Abnormal Psychology	
PSYC 3415	Experimental Social Psychology	
Complete required ancillary coursework from Biology and Chemistry:		*23*
Biology (p. 814)		
Chemistry (p. 814)		
Upper Division Biology/ Chemistry electives (p. 814)		
Complete Gardner Psychology Research Requirements: [1]		*6*
PSYC/MARC 4680	Behavioral & Biomedical Sciences Research Seminar [2]	
PSYC/MARC 4681	Behavioral & Biomedical Sciences Research Seminar II [3]	
PSYC/MARC 4780	Behavioral & Biomedical Sciences Research: Ethics & Issues [2]	
Total Hours		**57**

1 Students must earn a minimum grade of B or better in all of the following courses. It is required for students to have instructor permission to enroll in both PSYC 4680 Behavioral & Biomedical Sciences Research Seminar and PSYC 4681 Behavioral & Biomedical Sciences Research Seminar II

2 Take in the Fall.

3 Take in the Spring.

Additional Research Requirements

• The faculty mentor will work with students to guide fulfillment of these co-curricular requirements

- begin this course of study with at least 2 semesters remaining at CU Denver before graduation
- find a CU Denver Psychology faculty member who will mentor this project
- devote a minimum of 180 hours of work on this research project, completed during two semesters or more
- write a scientific paper describing the research
- present the results in an oral format
- present the results in poster format

Biology

Code	Title	Hours
Take the following:		*8*
BIOL 2010	Organisms to Ecosystems (Gen Bio)	
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)	
BIOL 2020	Molecules to Cells (Gen Bio)	
or BIOL 2040	Honors Molecules to Cells (Gen Bio)	
BIOL 2021	Molecules to Cells Lab (Gen Bio)	
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)	

Chemistry

Code	Title	Hours
Take the following:		*9*
CHEM 2031	General Chemistry I	
or CHEM 2081	Honors General Chemistry I	
CHEM 2038	General Chemistry Laboratory I	
or CHEM 2088	Honors General Chemistry I Laboratory	
CHEM 2061	General Chemistry II	
or CHEM 2091	Honors General Chemistry II Lecture	
CHEM 2068	General Chemistry Laboratory II	
or CHEM 2098	Honors General Chemistry II Laboratory	

Upper Division Ancillary Electives

Code	Title	Hours
Take two of the following upper division level ancillary elective courses:		*6*
BIOL 3225	Human Physiology	
BIOL 3244	Human Anatomy	
BIOL 3445	Introduction to Evolution	
BIOL 3611	General Cell Biology	
BIOL 3621	Introduction to Immunology	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 3832	General Genetics	
BIOL 4134	Human Genetics	
BIOL 4165	Neurobiology	
CHEM 3810	Biochemistry	
CHEM 4810	General Biochemistry I	
CHEM 4820	General Biochemistry II	

To learn more about the Student Learning Outcomes for this program, please visit our website.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Behavioral Cognitive Neuroscience Minor

Introduction

Please click here (p. 799) to see Psychology department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours, from approved courses.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
3. Students must complete a minimum of nine upper division (3000-level and above) credit hours, with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must complete at least one course from both the Cognitive and Behavioral Neuroscience categories.
2. Courses that count for the Behavioral Cognitive Neuroscience minor cannot count towards a Psychology major.
3. Courses that count for the Behavioral Cognitive Neuroscience minor cannot count toward the Psychology minor.
4. Students can take both PSYC 4054 Behavioral Neuroscience and BIOL 4165 Neurobiology, but only one can count toward this minor.

Code	Title	Hours
Complete the following required courses:		*6*
PSYC 1000	Introduction to Psychology I	
PSYC 2220	Biological Basis of Behavior	
Complete a minimum of one of the following Cognitive Neuroscience required courses:		*3*
PSYC 3144	Human Cognition	
PSYC 3205	Human Development I: Child Psychology	
PSYC 3222	Principles of Learning and Behavior	
PSYC 3305	Abnormal Psychology	
PSYC 3810	Neuropsychology	
Complete a minimum of one of the following Behavioral Neuroscience required courses:		*3*
BIOL 3104	Behavioral Genetics	
BIOL 4165	Neurobiology	
PSYC 3254	Introduction to Animal Behavior	
PSYC 3262	Health Psychology	
PSYC 3263	Hormones and Behavior	
PSYC 3264	Exercise, Brain and Behavior	
PSYC 3265	Drugs, Brain and Behavior	
PSYC 3724	Developmental Neuroscience	
PSYC 3822	Aging, Brain and Behavior	
PSYC 3832	Neural Basis of Learning	
PSYC 4054	Behavioral Neuroscience	
PSYC 4164	Psychology of Perception	
Complete one additional course from either the Cognitive Neuroscience list or Behavioral Neuroscience list as an elective.		*3*
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/psychology/learning-goals/).

Psychology Minor

Introduction

Please click here (p. 799) to see Psychology department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus and online program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 PSYC credit hours.
2. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
3. Students must complete a minimum of nine PSYC credit hours with a minimum of six upper division (3000-level and above) credit hours, with CU Denver faculty.

Program Restrictions, Recommendations and Allowances

1. Because minors are optional, there are no substitutions allowed to these requirements.
2. Students cannot earn a Psychology minor if they are also seeking a Psychology major.
3. Courses that count for the Psychology minor cannot count for the Behavioral Cognitive Neuroscience minor.
4. Students should see their minor advisor regularly to make sure they are completing the correct coursework.
5. Students with transfer credit for PSYC1005 that was awarded zero credits will need to take an additional three credit Psychology Elective course to reach the minimum credit hours required for the Psychology Minor.

Code	Title	Hours
Complete all of the following required courses:		*12*
PSYC 1000	Introduction to Psychology I	
PSYC 1005	Introduction to Psychology II	
PSYC 3144	Human Cognition	
or PSYC 322	Principles of Learning and Behavior	
PSYC 3205	Human Development I: Child Psychology	
or PSYC 3305	Abnormal Psychology	
or PSYC 3415	Experimental Social Psychology	
Complete at least one additional three credit hour PSYC elective course.		*3*
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/psychology/learning-goals/).

Religious Studies

Director: Alison Shah
Email: alison.shah@ucdenver.edu

Overview

An undergraduate minor is offered in Religious Studies, a discipline that overlaps with many other fields of study: anthropology, literature, philosophy, psychology and others. Religion has played a vital role in history and continues to do so in contemporary life. The degree of interaction between a religious tradition and its host society is profound. Knowledge of its religion(s) is essential for a genuine understanding of each culture. Students will study the nature of the belief systems of the world's great religious traditions. Specific courses will offer the possibility of focusing one's studies in the areas of ancient myth and shamanic traditions, Judaic and Christian studies, Islam, Asian religions, psychology of religion, philosophy of religion, anthropology and sociology of religion, religion and literature and biblical studies.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Click here (p. 822) to learn about the requirements for the Minor in Religious Studies.

Programs Offered

- Religious Studies Minor (p. 822)

Faculty

Professors:

Robert Metcalf (Philosophy)

Associate Professors:

Colleen Donnelly (English)
Sarah Hagelin (English)
Rachel Harding (Ethnic Studies)

Assistant Professors:

Dale Stahl (History)
Katherine Mohrman (Ethnic Studies)

Instructors:

Kari Alexander (Sociology)
Bassem Hassan (Political Science)
Daryl Mehring (Philosophy)
Richard Smith (History)

Lecturers:

Mary DeForest (Modern Languages)
AnnMarie Bridges (Religious Studies)
Albert McClure (Religious Studies)
Stephanie Yuhas (Religious Studies)

Religious Studies (RLST)

RLST 1610 - Introduction to Religious Studies (3 Credits)
Religion is a complex phenomenon which involves social norms, beliefs and fears, and overarching world view. Religious experiences are among the most profound an individual can have. The course examines religious phenomena from various perspectives, including philosophical, historical, psychological, anthropological, political, sociological, the symbolic and ritual. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

RLST 2660 - World Religions (3 Credits)
Provides an introduction to the basic beliefs and concepts of the world's great religious traditions. Covers the history, development, belief patterns, and institutional forms of the world's religions, including Judaism, Zoroastrianism, Christianity, Islam, Hinduism, Buddhism, Confucianism, Taoism and Shintoism. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

RLST 2680 - The American Indian Experience (3 Credits)
Surveys the relationships between Indian and non-Indian peoples, particularly in the context of the unique interaction between tribes and the federal government. Cross-listed with ETST 2606. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 2700 - The Bible as Literature (3 Credits)
Introduces students to biblical literature. Selections from the various genres of writing in Hebrew (history, wisdom, prophecy, literature) are read and discussed, as well as representative sections from the New Testament, including the gospels and the writings of Paul. Cross-listed with ENGL 2520. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3000 - Judaism, Christianity and Islam: Affinity and Difference (3 Credits)
Judaism, Christianity and Islam have much in common, beginning with their common patriarch Abraham. But there are also elements in each that are unrecognizable from the perspectives of the other two. This course will trace the relationships among the Children of Abraham across history and in today's turbulent world. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, INTS 3003, PHIL 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

RLST 3060 - History of Early Christianity (3 Credits)
History of the rise of Christianity and the decline of paganism in the Roman Empire from the birth of Jesus of Nazareth to ca. 500 C.E. Special emphasis on social, historical, legal, and cultural context of Christianity's rise and paganism's decline. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3100 - Islamic Politics and Culture (3 Credits)
Comprehensive, in-depth study of Islam and Muslims. Islam is viewed as a "way of life" with social, economic, psychological, spiritual, and political implications. Among topics to be examined are: women in Islam, Jihad, fundamentalism, Islamic movements, Islam and the West. Cross-listed with PSCI 4165. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3120 - Islamic Traditions (3 Credits)
Examines birth and history of Islam, its evolution from beginning to current trends and issues. Covers core beliefs, practices, differences between Sunni and Shi'a sects, and relationship to other Western religions. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

RLST 3300 - Shamanic Traditions (3 Credits)
Explores shamanic religious traditions across the world. This form of religion, involving spiritism, animism, trance states, and "mind power," is the oldest and most widespread religion in world history. Cross-listed with ETST 3300. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3410 - Asian Philosophies and Religions (3 Credits)
We in the Western world encounter a vastly different world, a radically different "universe of meaning," when we examine the traditions of the East. Even what we tacitly assume to be "real" is claimed by the Hindus and Buddhists of India to be a grand illusion. The world of China is, again, very different from India. An examination of Tibetan and Japanese religious forms will conclude our study of Asian thought. Cross-listed with PHIL 3410. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

RLST 3486 - Renaissance and Reformation (3 Credits)
Explores the late 13th through middle 17th centuries when European art and culture changed dramatically, and when Europe was torn by explosive ideological conflicts and religious upheaval. Cross-listed with HIST 3486. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3500 - Religions of India (3 Credits)
Examines the transcendentalist philosophy of India, which rests at the foundation of the great Eastern religious traditions of Hinduism and Buddhism. The Indian ideas of God, the soul, time, the nature of the universe, and its ultimate goal are examined. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3660 - Chinese Philosophy and Culture (3 Credits)
China is a fascinating world with its own characteristic orientation to philosophical questions. Chinese thinkers produced the "Flowering of a Hundred Schools of Thought" in the Axial Age, the same period of time in which philosophy was coming to birth in ancient Greece. Covers some of the Chinese schools, including Confucianism, Taoism, Mohism, Legalism, Chinese "Logic," and the later schools of Neo-Confucianism, Neo-Taoism and Chinese Buddhism. Cross-listed with PHIL 3981. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3720 - Religious Narratives (3 Credits)
Investigates the language and structure of religious discourse in Western literature. Welcomes interdisciplinary and comparative perspectives with a focus on cultural constructions of the sacred. Cross-listed with ENGL 3520. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3740 - Biblical Traditions: Old Testament (3 Credits)
Investigates the history and nature of the Biblical text. Follows the tradition of critical scholarship beginning in the Enlightenment era and continued down to the present day, sometimes entitled "Secular Humanism." Topics include theories of authorship of the Torah, its general nature and content; the historical books of the Bible, the Prophets, and the Wisdom Literature. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3760 - Biblical Studies: New Testament (3 Credits)
Examines the books of the New Testament from a scholarly, historical-critical perspective, which views it as a historically and culturally conditioned text, reflecting the beliefs and attitudes of the authors who produced it. The course covers the canonical gospels, letters, and other writings of the New Testament. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3770 - Archaeological Discoveries Relating to the Bible (3 Credits)
Examines the revolutionary impact of archaeology on Biblical Studies. Among these discoveries are Egyptian, Mesopotamian, and Canaanite texts, the Dead Sea Scrolls, and the Gnostic texts. Through these investigations, the Bible will be placed in its appropriate historical, literary and cultural context. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3800 - Spirituality and Ecology in Global Societies (3 Credits)
This course will examine the historical and contemporary attitudes and actions of religion in responding to the societal impacts of environmental concerns. We will investigate four worldviews in particular: indigenous traditions, Christianity, Judaism and Buddhism, and also consider how these traditions interact with public policy debates and their position on social justice and environmental issues. Religions both create and mitigate conflict. This course will consider ethical and moral approaches, philosophical principles and social movements including ecofeminism and ethics to provide tools for dialogue and critical thinking around ecological challenges. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Spring.

RLST 4000 - Religion and Cultural Diversity (3 Credits)
Religion is one of the key elements which creates multiculturalism. This course explores issues in religion and religious identity in contemporary America, including Native American spiritual traditions, Jewish-American traditions, Muslim-American traditions, Asian-American traditions, the African-American Pentecostal movement, and the growth of the Black Muslim movement. Attention is also given to the question of gender issues, as the traditional model for gender roles was formulated, in part, from a religious basis. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Spring.

RLST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, ETST 4002, INTS 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

RLST 4010 - Comparative Religious Systems (3 Credits)
A cross-cultural analysis of religious belief and behavior. Emphasis is placed on religions found among non-Western cultural groups and includes consideration of how major religions of the world are manifested on local levels. Cross-listed with ANTH 4130, 5130, RLST 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4020 - Sociology of Religion (3 Credits)
This course introduces students to the nature and functions of religion in society, emphasizing western religions in the U.S. Students will develop and apply an understanding of classic and modern sociological theories of religion to current events and disciplinary developments. Cross-listed with SOCY 4610, SOCY 5610, RLST 5020. Prereq: Junior or Senior standing or permission from instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

RLST 4030 - Race, Religion and Belonging in the United States (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images#as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 4030, ETST 5030, RLST 5030, HIST 4209 and HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4040 - Psychology of Religion (3 Credits)
Examines the theories developed by some of the great names in the field of psychology and their approaches to religion. Questions addressed include why people become religious, how religion functions in their lives, religious experience and assessment of the validity of religious claims. Key theorists studied include: William James, Sigmund Freud, Carl G. Jung, Abraham Maslow and Erich Fromm. Cross-listed with RLST 5040. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4060 - Questioning Religious Belief and Practice: Introduction to Philosophy of Religion (3 Credits)
Does God exist? Can the existence of God be proved? When is believing on faith acceptable? How or why is there a “problem of evil”? What are the attributes of a "god" and how can they be known, if at all? What is the relation of God to the world we experience? How does morality relate to religious belief and practice? The goal of the course is to broaden and deepen our understanding of key philosophical debates within religious traditions as we study prominent thinkers in the history of philosophy. Cross-listed with HUMN 5600, PHIL 4600, PHIL 5600, RLST 5060, and SSCI 5600. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

RLST 4070 - Western Religious Thought (3 Credits)
Focuses on philosophers and theologians who have contributed to the evolution of the three great religious traditions of the West: Judaism, Christianity and Islam. Targets thinkers from three periods: the ancient or formative era, the medieval era, and the contemporary era. Note: Specific philosophers chosen may vary in different semesters. Cross-listed with PHIL 4710. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4080 - Eastern Religious Thought (3 Credits)
Parallels the course in Western religious thought. The great religious traditions of the East, including Hinduism, Buddhism, Confucianism, and Taoism, are examined as they are presented in the writings of key philosophical representatives of each tradition. Cross-listed with PHIL 4720. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4100 - Special Topics in Religion (3 Credits)
This special topics course allows for a variety of subjects to be explored in different semesters, including such issues as the nature of religious experience, communication with the divine, specific historical themes and events in religion. Term offered: spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Spring.

RLST 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with INTS 4152, COMM 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4160 - Mysticism (3 Credits)
Explores the mystical strains within the world's great religious traditions. Jewish, Christian, and Islamic mystics did not always express the same beliefs and attitudes as mainstream adherents. When mystics are placed side-by-side, amazing similarities appear. One cannot always tell whether a given mystical statement is Hindu, Jewish, Sufi, or Christian. This class examines these mystical traditions, East and West. Cross-listed with RLST 5160. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4300 - Myth and Symbol (3 Credits)
Approaches the field of classical Greek mythology and religion from the perspective of Jungian archetypal theory. The deities of the ancient Greeks are presented as archetypal patterns with universal correlates elsewhere in world religions. A foundation in C. G. Jung's archetypal theory will be offered to ground the course material. Cross-listed with RLST 5300. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4320 - Spirituality in the Modern World (3 Credits)
Examines the issue of spiritual currents in the modern world. Joseph Campbell claimed that Western culture long ago lost an active sense of the sacred and that the traditional religions have not been the spiritual center for the vast majority of moderns for centuries. This class looks at the modern spiritual awakening in Shamanism, Eastern thought, the New Age movement, the men's movement, paganism and Goddess religion, and the revival of traditional religious forms in recent decades. Max Hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4340 - The Hero's Journey (3 Credits)
The myth of the hero's journey serves as a metaphor for the vicissitudes life puts each of us through. The hero or hera represents the ego-self who undertakes the journey--a grand adventure into the realm of the unknown--to seek the treasure. He or she is greatly transformed by the process, ultimately into the great self, who wins the boon to share with all humanity. Versions of the story are found all over the world, such as in the sagas of Gilgamesh, Odysseus, Psyche, King Arthur, Dorothy of Oz, and Luke Skywalker from a galaxy far, far, away. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4360 - Freudian and Jungian Perspectives in Dream Analysis (3 Credits)
Focuses on the phenomenon of dreams in a way that differs distinctly from the traditional approach to the subject in the field of psychology. "Spiritual" approaches to dreams are examined, as well as some major theorists on dreams, especially the work of Sigmund Freud and C. G. Jung. Cross-listed with RLST 5360. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4400 - Differing Concepts of God (3 Credits)
God, Gods, and Goddesses have been imagined in many different modes, forms, aspects, and guises throughout human history. This course investigates Paleolithic models of God, the Great Goddess of the Neolithic era, the Gods of mythological traditions, Biblical God, the abstract God of the philosophers, the God of the pantheists, the deists, and the God of the mystics. Cross-listed with RLST 5400, PHIL 4650 and 5655. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4420 - Goddess Traditions (3 Credits)
Explores the many forms which Goddesses have assumed through history, including the Neolithic Great Mother and her heiresses in the ancient Mediterranean cultures, such as: Isis, Ishtar, Demeter, Hecate, Aphrodite, Artemis, Athena and others, and their parallels in India. Goddess traditions have encompassed a full spectrum from virgins to Great Mothers to dark underworld Goddesses of death and destruction. Cross-listed with RLST 5420 and WGST 4420/5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4440 - Concepts of the Soul (3 Credits)
Asks the questions: What is the nature of the human being? What makes us "human?" Do humans have a "soul?" What is its nature? Is it different from the "spirit?" What is its ultimate fate? Examines the various theories put forward by philosophers of both Eastern and Western traditions. Cross-listed with RLST 5440 and PHIL 4470, 5470. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4460 - Death and Concepts of Afterlife (3 Credits)
Examines how the major religious traditions approach the issue of death. Where the Egyptians were fascinated by death, their Mesopotamian and Hebrew neighbors saw no kind of experience continuing after death. Concepts of the Final Judgment Day and the end of the world follow in Zoroastrianism, Christianity, and Islam, while Indian religions developed a sophisticated theory of reincarnation and the "art of dying." Finally, we will turn to Chinese belief in ancestral spirits. Cross-listed with RLST 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4462 - Islam in Modern History (3 Credits)
This course studies Islamic thought and practice over the last two centuries in terms of major historical processes that have operated at local, national, and global scales. Cross-listed with RLST 5462, HIST 4462, HIST 5462. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4480 - Perspectives on Good and Evil (3 Credits)
Examines "problem of evil" as formulated in the philosophical tradition. Presents classical formulation of the problem, traditional solutions & classical critiques of each answer. Considers perspectives of various religious orientations, which deal differently with the question of suffering. Cross-listed with PHIL 4480/5480, RLST 5480. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4500 - Religion and Politics (3 Credits)
Exploration of: (1) theoretical perspectives on the relationship between religion and politics; (2) causes of and justifications for the historical development of the Western separation of "church and state;" (3) contemporary responses to and analyses of this separation; and (4) several current debates about public policy in America that reveal tensions between these two spheres. Cross-listed with PSCI 4057, 5057 and RLST 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4710 - Women and Religion (3 Credits)
A sociological exploration of the contemporary roles of women in religion. Course examines American and world religious groups with an eye to women's involvement. Considers how women have changed these traditions as they take on leadership roles and discusses the tensions that arise within these traditions as a result of their expanded participation. Cross-listed with HUMN 5710, SSCI 4710/5710, WGST 4710/5710, RLST 5710. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4730 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. This course assumes that students have completed at least 9 hours of literature coursework. Cross-listed with ENGL 4510/5510, RLST 5730 and WGST 4510/5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4840 - Independent Study: RLST (1-3 Credits)
Various topics in religious studies pursued in independent research. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

RLST 4850 - Family Systems Therapy, Religion and Spirituality (3 Credits)
This course examines how the intersection between different religious and spiritual frameworks affects family systems. A strengths-based ecological perspective, family therapy theories and family systems theories will be used to understand religious and spiritual frameworks in working with families in schools and communities. Cross-listed with HDFR 4850. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Religious Studies Minor

Introduction

Please click here (p. 817) to see Religious Studies department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor, or the Program Director, Alison Shah.
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 credit hours of approved courses.
2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours of approved courses in the minor.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours of approved courses with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. A maximum of 9 credits hours of independent study courses may be applied to the minor.
2. Course lists in each category qualify as approved courses. Students may also seek approval from the Religious Studies program director to use a course not designated in the lists below, prior to completing the course.

Code	Title	Hours
Complete the following required course:		*3*
RLST 1610	Introduction to Religious Studies	
Complete one Western and one Eastern Religion course.		*6*
Western Religion (p. 822)		
Eastern Religion (p. 822)		
Complete nine elective credits from the approved list. Other courses, such as certain special topics, or art history courses featuring religious themes may apply, with approval from the minor advisor.		*9*
Electives (p. 822)		
Total Hours		**18**

Western Religion

Code	Title	Hours
Complete three credit hours from the following Western Religion courses:		*3*
RLST 2660	World Religions [1]	
RLST 2700/ ENGL 2520	The Bible as Literature	
RLST 3000	Judaism, Christianity and Islam: Affinity and Difference	
RLST 3120	Islamic Traditions	
RLST 3740	Biblical Traditions: Old Testament	
RLST 3760	Biblical Studies: New Testament	
RLST 3770	Archaeological Discoveries Relating to the Bible	
RLST 4400	Differing Concepts of God [1]	
RLST 4440/ PHIL 4470	Concepts of the Soul [1]	
RLST 4460	Death and Concepts of Afterlife [1]	
RLST/HIST 4462	Islam in Modern History	

[1] Fulfills requirement for either Eastern or Western religion, but not both simultaneously

Eastern Religion

Code	Title	Hours
Complete three credit hours from the following Eastern Religion courses:		*3*
RLST 2660	World Religions [1]	
RLST/PHIL 3410	Asian Philosophies and Religions	
PHIL 3981/ RLST 3660	Chinese Philosophy and Culture	
RLST 4080/ PHIL 4720	Eastern Religious Thought	
RLST 4160	Mysticism	
RLST 4400/ PHIL 4650	Differing Concepts of God [1]	
RLST 4440/ PHIL 4470	Concepts of the Soul [1]	
RLST 4460	Death and Concepts of Afterlife [1]	

[1] Fulfills requirement for either Eastern or Western religion, but not both simultaneously

Elective Courses

Code	Title	Hours
Complete nine credits from the following elective courses:		*9*
RLST 2660	World Religions	

RLST 2700/ ENGL 2520	The Bible as Literature
RLST 3000	Judaism, Christianity and Islam: Affinity and Difference
PHIL 3981/ RLST 3660	Chinese Philosophy and Culture
RLST 3060	History of Early Christianity
RLST 3100/ PSCI 4165	Islamic Politics and Culture
RLST 3120	Islamic Traditions
RLST/PHIL 3410	Asian Philosophies and Religions
RLST/HIST 3486	Renaissance and Reformation
RLST 3720/ ENGL 3520	Religious Narratives
RLST 3740	Biblical Traditions: Old Testament
RLST 3760	Biblical Studies: New Testament
RLST 3770	Archaeological Discoveries Relating to the Bible
RLST 3800	Spirituality and Ecology in Global Societies
RLST 4000	Religion and Cultural Diversity
RLST 4020/ SOCY 4610	Sociology of Religion
RLST/ETST 4030	Race, Religion and Belonging in the United States
RLST 4040	Psychology of Religion
RLST 4060/ PHIL 4600	Questioning Religious Belief and Practice: Introduction to Philosophy of Religion
RLST 4080/ PHIL 4720	Eastern Religious Thought
RLST 4160	Mysticism
RLST 4300	Myth and Symbol
RLST 4340	The Hero's Journey
RLST 4360	Freudian and Jungian Perspectives in Dream Analysis
RLST 4400/ PHIL 4650	Differing Concepts of God
RLST/WGST 4420	Goddess Traditions
RLST 4440/ PHIL 4470	Concepts of the Soul
RLST 4460	Death and Concepts of Afterlife
RLST/HIST 4462	Islam in Modern History
RLST/PHIL 4480	Perspectives on Good and Evil
RLST 4500/ PSCI 4057	Religion and Politics
RLST/WGST 4710	Women and Religion
RLST 4730/ ENGL 4510/ WGST 4510	Whores and Saints: Medieval Women
RLST 4840	Independent Study: RLST
RLST 4880	Directed Research

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/religious-studies/sites/default/files/attached-files/learning_objectives.pdf).

Social Justice

Director: Jim Walsh
Office: Student Commons 3217
Phone: 303-709-5110
E-mail: james.walsh@ucdenver.edu

Overview

The Social Justice Program is home to the Social Justice Minor and organizes innovative community and campus events to address the pressing social and economic issues of the 21st century. The Social Justice Minor is designed for students who are passionate about being engaged citizens and effecting change locally and globally. To this end, students will be exposed to global perspectives on social movements, conflict resolution, environmental stewardship, critical theory, and grassroots organizing.

Student Learning Goals

Earning a Social Justice Minor will make students competitive for graduate school as well as for jobs in NGOs, public health, political office, community leadership, and in the ever-increasing number of modern corporations that seek employees who are committed to sustainable and ethical vocations. We create learning opportunities that emphasize an integrated understanding of the social, political, economic, and cultural dimensions of the major challenges facing humanity in the new millennium. By cultivating engaged and informed citizens, we seek to create future leaders who will have the skills and knowledge necessary to effect meaningful change.

Click here (p. 826) to learn about the requirements for the Minor in Social Justice.

Programs

- Social Justice Minor (p. 826)

Faculty

Christopher Agee- Department of History
Jody Beck- College of Architecture and Planning
Edelina Burciaga- Department of Sociology
Ryan Crewe-Department of History
Jana Everett- Department of Political Science
Mia Fischer- Department of Communication
Rodney Herring- Department of English
David Hildebrand- Department of Philosophy
Cheryl Matias- School of Education and Human Development
Lucy McGuffey- Department of Political Science
Glenn Morris- Department of Political Science
Marty Otañez- Department of Anthropology
Omar Swartz- Department of Humanities and Social Sciences
Sarah Tyson- Department of Philosophy
Sam Walker- Department of Philosophy
James Walsh- Department of Political Science
Margaret Woodhull- Department of Humanities and Social Sciences

Social Justice (SJUS)

SJUS 2000 - Foundations in Social Justice (3 Credits)
Examines how well the United States, Colorado and Denver are doing in addressing issues of social justice, such as inequality and environmental degradation. Explores various modes of democratic participation -- electoral politics, community activism, and lifestyle changes -- in advancing social justice. Term offered: fall. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall.

SJUS 2010 - Social Justice: Theories, Narratives, and Technologies (3 Credits)
How can citizens of a democracy address social justice issues? This course examines theoretical perspectives relevant to social justice, the narratives which express and question social order, and the technologies which alternately shape and reflect local, regional, and global cultures. Max hours: 3 Credits.
Grading Basis: Letter Grade

SJUS 3050 - Special Topics: Social Justice (1-3 Credits)
Special Topics in Social Justice will be covered. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

SJUS 3939 - Internship (1-12 Credits)
Internship/experiential learning involving work in the community that is centered upon social justice and which includes a reflective component and some type of public dissemination. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SJUS 4000 - Social Justice Capstone (3 Credits)
Students design and carry out research projects that address important civic issues in collaboration with community partners and present their findings to the partners and academic community. This course also involves reflection on social justice means and goals. Note: Students may not receive credit for SJUS 4000 if they have already received credit for SJUS 4001 and may not receive credit for SJUS 4001 if they have already received credit for SJUS 4000. Prereq: Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Additional Information: Upper Division; Credit.

SJUS 4001 - Social Justice Senior Project (3 Credits)
Students design and carry out research projects that address important civic issues in collaboration with community partners and present their findings to the partners and academic community. This course also involves reflection on social justice means and goals. This is an individually structured version of SJUS 4000 so students may not receive credit for SJUS 4001 if they have already received credit for SJUS 4000 and may not receive credit for SJUS 4000 if they have already received credit for SJUS 4001. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Max hours: 3 Credits.
Grading Basis: Letter Grade

SJUS 4050 - Special Topics: Social Justice (3 Credits)
Special Topics in Social Justice will be covered. Cross-listed with SJUS 5050. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

SJUS 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SSCI 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SJUS 4840 - Independent Study (3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SJUS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Social Justice Minor

Introduction

Please click here (p. 824) to see Social Justice department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please click here (p. 380) to go to information about declaring a major/minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 18 credit hours from the approved courses.
2. Students must complete a minimum of nine upper-division (3000-level and above) credit hours in the minor, chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved courses below.

Code	Title	Hours
Complete the following foundations course:		*3*
SJUS 2000	Foundations in Social Justice	
Complete nine elective credit hours from the following approved course lists. [1]		*9*
Anthropology (p. 826)		
Communication (p. 826)		
Education (p. 827)		
English (p. 827)		
Ethnic Studies (p. 827)		
Geography and Environmental Sciences (p. 827)		
History (p. 827)		
Landscape Architecture (p. 827)		
Philosophy (p. 827)		
Political Science (p. 827)		
Public Service (p. 827)		
Religious Studies (p. 827)		
Sociology (p. 827)		
Social Justice (p. 828)		
Social Sciences (p. 828)		
Women's and Gender Studies (p. 828)		
Complete a three credit hour community internship. Work with local organizations to promote social justice. [2]		*3*
SJUS 3939	Internship	
Complete a three credit hour capstone seminar. Work on a project related to a social justice issue that is important to you with a faculty member in an independent study. [3]		*3*
SJUS 3050	Special Topics: Social Justice	
SJUS 4000	Social Justice Capstone	
SJUS 4001	Social Justice Senior Project	
SJUS 4050	Special Topics: Social Justice	
SJUS 4840	Independent Study	
SJUS 4880	Directed Research	
Total Hours		**18**

[1] The elective course lists are representative of the pre-approved coursework for this minor. Students may complete other courses with permission from the Director of the program.

[2] Placement in internships is facilitated by CU Denver Experiential Learning Center.

[3] The Director of the program will gladly work with students to approve courses, independent study, directed research and internships that address social justice issues but are not officially listed.

Anthropology

Code	Title	Hours
ANTH 3000	Globalization, Migration and Transnationalism	
ANTH 3142	Cultural Diversity in the Modern World	
ANTH/PBHL 3200	Human Migration: Nomads, Sojourners, and Settlers	
ANTH 4300	Migrant Health	

Communication

Code	Title	Hours
COMM 2020	Communication, Citizenship, and Social Justice	
COMM 2082	Introduction to Environmental Communication	
COMM 3271	Communication and Diversity	
COMM 4040	Communication, Prisons, and Social Justice	
COMM 4260	Communication and Conflict	
COMM 4265	Gender and Communication	
COMM 4282	Environmental Communication	
COMM 4558	Digital Health Narratives	
COMM/WGST 4610	Communication, Media, and Sex	
COMM 4710	Topics in Communication (topic must be approved by SJ minor advisor)	

Education

English

Code	Title	Hours
ENGL 3330	Topics in Literature (topic must be approved by SJ minor advisor)	
ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics (topic must be approved by SJ minor advisor)	
ENGL 4280	Proposal and Grant Writing	
ENGL/PHIL/ WGST 4308	Contemporary Feminist Thought	
ENGL 4770	Topics in English: Film and Literature (topic must be approved by SJ minor advisor)	
ENGL 4755	Illness & Disability Narrative	

Ethnic Studies

Code	Title	Hours
ETST/PBHL 3002	Ethnicity, Health and Social Justice	
ETST 3110	Indigenous Studies	
ETST 3272	Global Media	
ETST 3274	Power, Poverty, Culture	
ETST/HIST 3396	History of the American Indian	
ETST/HIST 3297	Social History of Asian Americans	
ETST 3704	Culture, Racism and Alienation	

Geography & Environmental Sciences

Code	Title	Hours
GEOG 3401	Geography of Food and Agriculture	
GEOG 3412	Globalization and Regional Development	
GEOG 3501	Geography of Health	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4301	Population, Culture, and Resources	
GEOG 4420	The Politics of Nature	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG 4680	Urban Sustainability: Perspectives and Practice	

History

Code	Title	Hours
HIST 3235	U.S. Labor History, 1800 to the Present	
HIST/WGST 3343	Women & Gender in US History	
HIST 3345	Immigration and Ethnicity in American History	
HIST 3349	Social Movements in 20th Century America	
HIST 4028	Nations and Classes: 19th Century Europe	
HIST 4217	Consumer Culture	
HIST/ENGL/ WGST 4306	Survey of Feminist Thought	
HIST 4308	Crime, Policing, and Justice in American History	
HIST 4455	African Struggle for Independence	

Landscape Architecture

Code	Title	Hours
LDAR 3601	Intro to Landscape Arch: Engaging Designed Landscape	
LDAR 4486	Special Topics in Landscape Architecture (topic must be approved by SJ minor advisor)	

Philosophy

Code	Title	Hours
PHIL 3200	Justice, Freedom, and Power: Social and Political Philosophy	
PHIL 3280	War and Morality	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL 3550	Philosophy of Death and Dying	
PHIL 4101	Pragmatism: Classical American Philosophy	
PHIL 4450	Punishment and Social Justice	
PHIL/WGST 4500	Feminist Philosophy	
PHIL 4812	Special Topics in Philosophy (topic must be approved by SJ minor advisor)	
PHIL 4920	Philosophy of Media and Technology	

Political Science

Code	Title	Hours
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3914	The Urban Citizen	
PSCI 4002	Topics in Political Science (topic must be approved by SJ minor advisor)	
PSCI 4025	Local Governance and Globalization	
PSCI/ETST 4144	Indigenous Political Systems	
PSCI/ETST 4146	Indigenous Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI 4265	Social Justice And Globalization	
PSCI 4535	Labor and Working Class Politics	
PSCI 4545	Immigration Politics	
PSCI 4808	Strategies of Peacebuilding	
PSCI 4914	Community Organizing and Community Development	

Public Service

Code	Title	Hours
PUAD 4000	Human Resources and Ethics in Public Service	
PUAD 4002	Leading and Engaging for the Public Good	

Religious Studies

Code	Title	Hours
RLST 4000	Religion and Cultural Diversity	

Sociology

Code	Title	Hours
SOCY 3001	Urban Sociology	
SOCY 3020	Race and Ethnicity in the U.S.	

SOCY 3140	Sociological Theory
SOCY 3720	Global Perspectives on Social Issues
SOCY 4700	Sociology of Law

Social Justice

Code	Title	Hours
SJUS 4050	Special Topics: Social Justice	

Social Sciences

Code	Title	Hours
SSCI 4050	Special Topics in Law Studies	
SSCI 4070	Topics in Law Studies: Social Context of Law	
SSCI 4325	First Amendment: Theory and Context	

Women's and Gender Studies

Code	Title	Hours
WGST/ENGL/ HIST 4306	Survey of Feminist Thought	
WGST/ENGL/ PHIL 4308	Contemporary Feminist Thought	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/socialJustice/social-justice-minor/).

Sociology

Chair: Keith Guzik
Program Assistant: Anne Beard
Office: Lawrence Street Center, Suite 420
Telephone: 303-315-2148
Fax: 303-315-2149

Overview

Undergraduate Information

Sociology is the scientific study of groups, social processes, social institutions and behavior. The major in sociology is designed to familiarize students with these areas through an understanding of theory, methods and data analytic procedures employed within them. Three certificate options at the undergraduate level allow students interested in gaining concentrated study in a sub-area of sociology to do so. They include: Criminology; Families and Social Welfare; and Community Health and Medicine. All students majoring in sociology, regardless of whether they pursue a certificate (or multiple certificates), develop a strong foundation in the basics of the discipline, including the use of qualitative and quantitative research methodologies and theory.

The major prepares students for either graduate study or the pursuit of a career immediately upon completion of the BA degree. The required Senior Capstone course is a critical resource in preparing for either option. Graduates with a Sociology BA are employed in a variety of professional areas, including the criminal justice system, education, health and social services, and with state and local government agencies. The department has developed the following rationale for courses offered:

1. Lower-division courses (for majors and non-majors)
    a. 1000-level courses provide an introduction to the broad sociological perspective as it applies to social life, social systems and society.
    b. 2000-level courses introduce students to somewhat more specific content areas: social psychology, deviant behavior and social inequalities, etc.
2. Upper-division courses (3000 and 4000)
    a. 3000-level courses serve as advanced surveys of some specific area of concentration. They are designed to acquaint students with the issues, methods, concepts and theoretical frameworks employed in the content area. Such courses as medical sociology, criminology, sociology of family, and race and ethnicity are offered at this level. Many of these courses are open courses, in that students from other departments and colleges are encouraged to enroll in them.
    b. 4000-level courses are devoted to a more detailed in-depth examination of specific issues, approaches and concepts within the previously identified content areas. These are advanced courses and are geared more directly to sociology and social science majors.
    c. Sophomore standing is required for enrollment in all 3000-level courses, and junior standing is required for enrollment in 4000-level courses.

The department requires that SOCY 1001 Understanding the Social World be completed prior to any of the major's core requirements (SOCY 2001 Inequalities in Social World, SOCY 3115 Quantitative Methods & Analysis, SOCY 3119 Qualitative Methods, SOCY 3140 Sociological Theory and SOCY 4830 Senior Capstone: Worklife Practices & Policies).

Click here (p. 836) to learn about the requirements for the Major in Sociology.
Click here (p. 840) to learn about the requirements for the Minor in Sociology.
Click here (p. 843) to learn about the requirements for the Undergraduate Certificate in Criminology.
Click here (p. 845) to learn about the requirements for the Undergraduate Certificate in Families and Social Welfare.
Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/sociology/sociology-health-medicine-certificate/) to learn about the requirements for the Undergraduate Certificate in Community Health and Medicine.
Click here (p. 839) to learn about the 4+1 BA to MA program.

Departmental Honors

Students wishing to graduate with departmental honors in sociology (*cum laude*, *magna cum laude*, or *summa cum laude*) must have a minimum cumulative GPA of 3.0 (while enrolled at the University of Colorado Denver) and a 3.2 or higher in all sociology courses. Additionally, departmental honors requires the student to complete 6 hours of SOC 4880, Directed Research, under the supervision of a Sociology faculty member. This independent research is spread over at least 2 semesters and serves as the basis for the honors thesis. The thesis is presented in a departmental colloquium at least six weeks before the end of the semester in which the student intends to graduate. Interested students are encouraged to contact the Undergraduate Program Director, Dr. Maren Scull, prior to the beginning of their senior year if they intend to pursue departmental honors.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/sociology/) catalog to read about our graduate programs.

Programs Offered

- Sociology, BA (p. 836)
- Sociology - Gender and Society Concentration, BA (p. 837)
- Sociology, 4 + 1 BA/ MA (p. 839)
- Sociology Minor (p. 840)
- Community Health and Medicine Undergraduate Certificate (p. 841)
- Criminology Undergraduate Certificate (p. 843)
- Families and Social Welfare Undergraduate Certificate (p. 845)
- Justice, Allyship, Diversity and Equity Undergraduate Certificate (p. 847)

Faculty

Professors:

Jennifer A. Reich, PhD, University of California, Davis

Associate Professors:

Keith Guzik, PhD, University of Illinois at Urbana-Champaign
Esther Sullivan, PhD, University of Texas at Austin

Assistant Professors:

Brenden Beck, PhD, City University of New York-Graduate Center
Edelina Burciaga, PhD, University of California-Irvine
Adam M. Lippert, PhD, The Pennsylvania State University

Associate Professors, Clinical Teaching Track:

Maren T. Scull, PhD, Indiana University

Assistant Professors, Clinical Teaching Track:

Jenny Vermilya, PhD, University of Colorado Boulder

Senior Instructors:

Kari Alexander, PhD, University of Colorado Boulder

Instructors:

Carlos Reali, MA, University of Colorado Denver

Professors Emeritus:

Sharon K. Araji, PhD, Washington State University
Teresa M. Cooney, PhD, The Pennsylvania State University
Karl H. Flaming, PhD, Syracuse University

Associate Professor Emeritus:

Richard H. Anderson, PhD, University of Oregon
Candan Duran-Aydintug, PhD, Washington State University

Sociology (SOCY)

SOCY 1001 - Understanding the Social World (3 Credits)
This survey course provides an introduction to the sociological study of society, including patterns of social relationships, social interaction, and culture. Typical course topics include socialization, the family, criminology, deviance, inequalities, sex and gender, race and ethnicity, health and medicine, self and identities, and globalization. Students gain an understanding of how organizations, institutions, and structures of society shape individual and group experiences. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.

SOCY 1011 - From Killer Apps to Killer Bots: Technology and Social Change (3 Credits)
A young college student updates her social media page to stay in touch with family and high school friends while making new friends on campus. An upstart automobile manufacturer builds a factory manned by robots to produce electronic vehicles designed to reduce the environmental impact of automobiles. The military deploys battalions of unmanned drones to engage with adversaries without risking the lives of their soldiers. Technology mediates nearly all aspects of social life, from reproduction and parenting to crime control and heath care. This course is designed to provide students an introduction to the different social dimensions of technological innovation as well as the theoretical and methodological tools sociologists use to study them. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

SOCY 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

SOCY 2001 - Inequalities in Social World (3 Credits)
Introduces students to critical sociological perspectives on social inequality. Major sociological factors contributing to the production and reproduction of inequality in various social organizations and institutions are analyzed. Prereq: SOCY 1001 or permission of the instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001
Typically Offered: Fall, Spring.

SOCY 2440 - Deviance and Social Control (3 Credits)
This class explores different forms of deviance and ways in which deviant categories are created,and examines sociological theories of deviance, social order, and social power. The course also addresses how different groups gain control over social definitions and the consequences these definitions have in the form of norms, laws, and informal social sanctions. The impact of these definitions for individuals also is considered, namely for how people construct and manage their identities. Topics covered include drug smuggling, gang membership, computer hacking, shoplifting, homelessness, eating disorders, transability, BDSM, self-injury, and sex work. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SOCY 2462 - Introduction to Social Psychology (3 Credits)
Studies the development and functioning of persons, especially within a group context, and the dynamics of small groups. Emphasis on the import of symbols for human behavior, development of self-concepts, and processes of competition and cooperation in group dynamics. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring, Summer.

SOCY 3001 - Urban Sociology (3 Credits)
Explores U.S. cities as built environments, cultural spaces, and sources of community. Topics include the history of urbanization; social and spatial organization of cities; race and residential segregation; suburbanization; and urban problems such as crime, environmental hazards, and gentrification. Prereq: Sophomore standing or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3010 - Sociology of Human Sexuality (3 Credits)
Increases the understanding of differences in views of sexuality, specifically the link between sex and reproduction and its role as the motivation for gender roles and sex acts. Explores the history of sexuality, cross-cultural studies and primate modeling. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with WGST 3010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3020 - Race and Ethnicity in the U.S. (3 Credits)
A sociological examination of race and ethnicity in contemporary U.S. society. Includes a focus on the nature and causes of prejudice and discrimination. Dominant-minority relations are examined, with an emphasis on current status of minority groups and issues. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

SOCY 3040 - Drugs, Alcohol & Society (3 Credits)
Explores our culture's relationship with drugs and alcohol from a sociological perspective, investigating all spheres of substance use: recreational, medicinal, instrumental, & religious. Examines our long turbulent history with these chemicals, and ways in which they have shaped our society. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3050 - Sociology of Education (3 Credits)
Drawing from theories in the sociology of education, this course evaluates the relationship between race, ethnicity, gender, class, immigration status and educational experiences, aspirations, and outcomes. Topics include socialization, tracking, educational policy, college access, and educational equity. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3080 - Sex and Gender (3 Credits)
Causes and consequences of sex role differentiation at the individual, group and societal levels. Current issues related to changing norms and values concerning gender in modern society are examined. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with WGST 3080. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3115 - Quantitative Methods & Analysis (4 Credits)
This course provides students with a basic understanding of survey methods and statistical analysis. In addition to learning the basics of inferential statistics and sampling methods, students will conduct their own survey research, analyze data, and produce reports. Prereq: SOCY 1001 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3119 - Qualitative Methods (4 Credits)
This course focuses on the development of skills involved in designing qualitative research studies, collecting and analyzing qualitative data and evaluating qualitative research. Primary focus is on ethnography, in-depth interviewing, and content analysis. Students read, analyze, and conduct qualitative research. Prereq: SOCY 1001 with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001 with a C- or higher.
Typically Offered: Fall, Spring.

SOCY 3140 - Sociological Theory (3 Credits)
An overview of major sociological theories and concepts. The emergence of the discipline and the contemporary development of sociological theories are examined. Prereq: SOCY 1001. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001
Typically Offered: Fall, Spring.

SOCY 3300 - Social Problems (3 Credits)
Explores how societies define and attempt to solve “social problems.” Possible topics: income disparities, race/ethnic relations, gender inequality, and sexuality, in addition to the relationship between these issues and social institutions such as education, religion, health care, and criminal justice. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3440 - Medical Sociology (3 Credits)
This course covers key issues in population health and emphasizes how sociological perspectives both challenge and augment biomedical perspectives on health and health care. We also discuss the social causes and consequences of race/ethnic, sex, and socioeconomic disparities in health. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with PBHL 3440. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3490 - Criminology (3 Credits)
Theories, nature and causes of crime as a social phenomenon. Processes of making laws, breaking laws, and reaction toward the breaking of laws. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3500 - Topics in Sociology (1-3 Credits)
Special topics in sociology to be selected by the instructor. Note: Can be taken more than once when topics vary. Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3510 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3520 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3530 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3540 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3550 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3570 - Death & Dying: Social & Medical Perspectives (3 Credits)
Focusing on death, dying and bereavement using medical and social perspectives, this course explores how illness, prolonged dying and sudden death impact care providers, families and communities. Discussion, film, readings and music address the connection of social and medical issues. Cross-listed with HEHM 3570. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SOCY 3650 - Sociology of Music (3 Credits)
Focuses on the meaning/use of music in society. Explores censorship, organization of the recording industry, sociocultural contexts in which music is produced/distributed/listened to and the relationship between music and technology along with musical applications and associations. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3697 - Contemporary Asian American Experience (3 Credits)
Examines the contemporary Asian American experience, including the adaptation of new immigrants or refugees, economic and educational problems, ethnic identity, intermarriage, anti-Asian discrimination and other civil rights issues, and recent political activism. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with ETST 3697. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3700 - Families and Society (3 Credits)
This course explores multiple dimensions of family as a social institution. Using a critical approach, we examine historical, cultural, and political views about families. We consider multiple forms of contemporary families, discuss the many issues facing families, and study how families and family life have become politicized. Cross-listed with WGST 3700. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3720 - Global Perspectives on Social Issues (3 Credits)
Various cultural and social frameworks are used in a sociological examination and international comparison of select social issues, such as globalization, terrorism, inequality and discrimination. Analysis of selected issues across cultures explores how societal and cultural characteristics shape these issues. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

SOCY 3750 - Animals and Society (3 Credits)
An examination into the category of “animal” as a social construct and the relationship between humans and non-human animals, which produces consequences of difference and subsequent inequality. The course utilizes different sociological perspectives to examine the social patterns, processes, and institutions that establish our lived experiences with non-human animals. Prereq: Sophomore standing or higher or by instructor permission. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

SOCY 3840 - Independent Study: SOCY (1-3 Credits)
Prereq: sophomore standing or permission of the instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Sophomore standing or higher.

SOCY 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

SOCY 4020 - Race, Culture and Immigration (3 Credits)
In this course, we will consider the social and legal construction of race and immigration. We will also explore how immigrants have been racialized both historically and in the current moment. In addition, we will consider the role of culture in shaping the immigrant experience and immigrant outcomes. Restriction: Junior standing or higher or instructor permission. Cross-listed with SOCY 5020, ETST 4020 and ETST 5020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4050 - Health Disparities (3 Credits)
This course focuses on social, economic, and political factors that shape the uneven distribution of health and illness in the United States. Social determinants of health are explored, including socioeconomic status, race and ethnicity, neighborhood environments, social relationships, and gender. Cross-listed with SOCY 5050. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SOCY 4110 - Sociology of Health Care (3 Credits)
Examines U.S. health care institutions and issues such as rising costs, the effects of class, racial and gender inequality, professionalization and monopolization of roles, construction of illness and health, managed care, for-profit health care, and ethics of health care decisions. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5110. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4220 - Population Change and Analysis (3 Credits)
Concepts of population change, methods of analysis, and applications to contemporary social issues. Topics include age and sex distributions, fertility, mortality, and migration, and the social causes and consequences of these phenomena. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5220. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4270 - Social Meanings of Reproduction (3 Credits)
Reproduction involves more than biological processes, assuming symbolic, political, and ideological meanings. This course examines contested meanings of reproduction, including how people experience reproduction, controversies over who should reproduce (and under what circumstances), and how public policy mediates these conflicts. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5270, WGST 4270 and WGST 5270. Term offered: fall. Max hours 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4290 - Aging, Society and Social Policy (3 Credits)
A sociological examination of central issues (e.g., work, retirement, family support, health) pertaining to the aging population. Heterogeneity in aging, as shaped by gender, race, ethnicity and social class is addressed, as well as policies pertaining to the adult population. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5290. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4340 - Juvenile Delinquency (3 Credits)
Factors involved in delinquent behavior. Problems of adjustment for delinquents, and factors in treatment and post-treatment adjustment. Major theories covered include strain theory, social learning theory, control theory, and labeling theory. Course also reviews methods for testing these theories. Prereq: junior standing or higher or permission of the instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4440 - Poverty and Social Inequality (3 Credits)
Investigates the distribution of wealth, income, and economic power in the United States with a focus on social institutions and factors that shape inequality. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4460 - Hate Groups and Group Violence (3 Credits)
Social sciences help us understand the phenomena of hate groups and group violence and contribute toward their elimination. Examples are examined using theoretical perspectives on different levels of analysis and within different areas of research. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4590 - Crime, Justice, and the City (3 Credits)
In this course, we will ask why inequality, crime, and police are unevenly spread across cities. We will examine why crime varies by neighborhood, whether place-based policing is racially biased, and why prisons are filled with people from just a few zip codes. We will study racial and economic segregation, gentrification, white flight, and suburbanization in the context of criminal justice. Spatial analysis is a growing field combining geography, sociology, and criminology. We will study it by reading cutting-edge researchers who use mapping, interviews, statistical analysis, and ethnography. Restriction: Restricted to students with Junior standing or higher or with instructor permission. Cross-listed with SOCY 5590. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

SOCY 4610 - Sociology of Religion (3 Credits)
This course introduces students to the nature and functions of religion in society, emphasizing western religions in the U.S. Students will develop and apply an understanding of classic and modern sociological theories of religion to current events and disciplinary developments. Cross-listed with SOCY 5610, RLST 4020, RLST 5020. Prereq: junior standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4640 - Sociology of Childhood and Adolescence (3 Credits)
An in-depth overview of the theories and research regarding the life course understanding of infancy, childhood and adolescence. Children's lives and cultures in relation to adults and their transition from childhood to adolescence are studied. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5640. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4650 - Sociology of Adulthood and Aging (3 Credits)
Examination of the adult life course—post-adolescence to death, focusing on key social transitions of adulthood (e.g., independence from parents, marriage, retirement), and historical, institutional, and social factors that create variation in their timing, meaning, and individuals' role experiences. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5650. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4690 - Crime and Inequality Over the Life Course (3 Credits)
Life-course perspective on inequality and crime. Studies transitions, trajectories and turning points as key features of the life course. Considers how inequalities and criminal behavior are shaped by timing of experiences, historical and geographic contexts, others' lives, and human agency. Restriction: Restricted to Graduate and Graduate Non-Degree majors. Cross-listed with SOCY 5690. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Typically Offered: Fall.

SOCY 4700 - Sociology of Law (3 Credits)
Consideration of the formulation, interpretation, and legitimacy of legal rules within the context of social organization. The examination of a major social institution in modern society. Prereq: junior standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4740 - Courts & Society (3 Credits)
Courts are a centerpiece of modern legal systems that mediate social relationships and people's relationship to the state. This course explores the connection between courts and democratic society by considering the operation and evolution of courts in the U.S. Cross-listed with SOCY 5740. Restriction: Restricted to Junior standing or above. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4770 - Advanced Topics in Sociology (1-3 Credits)
Advanced study of special topics in sociology to be selected by the instructor. Note: May be repeated for credit when topics vary. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5770. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SOCY 4774 - Advanced Topics in Sociology (3 Credits)
Advanced study of special topics in sociology to be selected by the instructor. Note: May be repeated for credit when topics vary. Prereq: Junior standing or permission of the instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SOCY 4780 - Violence in Relationships (3 Credits)
Course focuses on the study of violence among individuals involved in intimate relationships; factors in society such as norms, laws and institutions that are related to creating violence among intimates; and social policies, prevention, intervention and treatment programs. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5780, WGST 4780 and WGST 5780. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4830 - Senior Capstone: Worklife Practices & Policies (3 Credits)
Introduces students to tools and develops skills to facilitate internship and job search. Students gain understanding of work contexts, exploring employment laws and policies, dynamics of race and gender in job searching, and research on careers and job negotiation. Prereq: Must have earned a minimum of 75 credits. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SOCY 4840 - Independent Study: SOCY (1-3 Credits)
Prereq: junior standing or higher or permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: junior standing or higher

SOCY 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Prereq: junior standing or higher. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: junior standing or higher

SOCY 4910 - Research Practicum (1-3 Credits)
Practical experiences for undergraduates in application of principles of research design and data processing to a social research problem selected by the instructor. Prereq: junior standing or higher or permission of instructor. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: junior standing or higher

SOCY 4995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Sociology, BA

Introduction

Please click here (p. 829) to see Sociology department information.

Sociology is the study of social relations, interactions, and institutions. Using quantitative and qualitative scientific methods, it offers a unique way of seeing and understanding the social world and how it shapes individual lives and history. Sociology's subject matter is broad and diverse. Some of the topics covered are criminology, religion, families, inequalities between social groups, childhood, youth, adulthood and old age, social stability and social change, urban issues, environment, technology, education, and health.

All prospective majors should contact the undergraduate advisor in Sociology as early in their academic careers as possible for information about the degree requirements. Transfer or returning students should consult with the undergraduate advisor in Sociology concerning completion of the core courses.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.
- This program is also offered online.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 32 SOCY credit hours.
2. Students must complete a minimum of 16 upper-division (3000-level and above) SOCY credit hours, including a minimum of three credit hours at the 4000 level.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 13 SOCY credit hours with CU Denver faculty.

Program Allowances and Restrictions

1. Students must take a minimum of three credit hours in elective courses at the 4000 level.

Code	Title	Hours
Complete all the following required courses:		*20*
SOCY 1001	Understanding the Social World	
SOCY 2001	Inequalities in Social World	
SOCY 3115	Quantitative Methods & Analysis	
SOCY 3119	Qualitative Methods	
SOCY 3140	Sociological Theory	
SOCY 4830	Senior Capstone: Worklife Practices & Policies	
Complete a minimum of 12 SOCY elective credit hours. At least three credit hours must be completed at 4000-level or higher.		*12*
Total Hours		**32**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/sociology-ba-learning-outcomes/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Sociology - Gender and Society Concentration, BA

Introduction

Please click here (p. 829) to see Sociology department information.

A concentration in Gender and Society provides students with an understanding of the role of gender in the experiences of females, males, and gender non-conforming individuals. The interdisciplinary nature of the concentration enables students to develop the skills to critically evaluate the ways in which inequality, oppression, and social structure contribute to various social problems such as the pay gap, sexual assault, domestic violence, and human trafficking. The Gender and Society concentration equips students for jobs in a variety of areas such as advocacy, counseling, public health, policy-making and government, business, and criminal justice.

All prospective majors should contact the undergraduate advisor in Sociology as early in their academic careers as possible for information about the degree requirements. Transfer or returning students should consult with the undergraduate advisor in Sociology concerning completion of the core courses.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 38 credit hours, including a minimum of 20 SOCY credit hours and 18 ancillary credits.
2. Students must complete a minimum of 16 upper-division (3000-level and above) credit hours from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 13 SOCY credit hours with CU Denver faculty.

Program Allowances and Restrictions

1. Students must take four electives for the major. Three of these electives must be cross-listed as SOCY and WGST. The fourth elective must be a WGST course that is not cross-listed with a Sociology course or a WGST internship.
2. Students who pursue this concentration simultaneously earn a minor in Women's and Gender Studies (p. 859).
3. Transfer courses must be evaluated for acceptability to CU Denver prior to being applied to any of the following major requirements.

Code	Title	Hours
Complete all of the following required courses:		*26*
SOCY 1001	Understanding the Social World	
SOCY 2001	Inequalities in Social World	

SOCY 3115	Quantitative Methods & Analysis	
SOCY 3119	Qualitative Methods	
SOCY 3140	Sociological Theory	
SOCY 4830	Senior Capstone: Worklife Practices & Policies	
WGST 1050	Introduction to Women's and Gender Studies	
WGST 4306	Survey of Feminist Thought	
or WGST 4308	Contemporary Feminist Thought	
Complete three courses (nine credit hours) in WGST/ SOCY cross-listed elective courses:		*9*
SOCY/WGST 3010	Sociology of Human Sexuality	
SOCY/WGST 3080	Sex and Gender	
SOCY/WGST 3700	Families and Society	
SOCY/WGST 4270	Social Meanings of Reproduction	
SOCY/WGST 4780	Violence in Relationships	
Complete one additional WGST Elective from the following list:		*3*
WGST 3020	Gender, Sexuality and Race in American Popular Culture	
WGST/HIST 3343	Women & Gender in US History	
WGST/ENGL 3450	Contemporary Women Writers	
WGST 4010	Special Topics in Women's and Gender Studies	
WGST/PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism	
WGST/PSCI 4215	Women's Rights, Human Rights: Global Perspectives	
WGST/HIST 4225/GEOG 4625	Urban America	
WGST/HIST 4230	Women in the West	
WGST/PSCI 4248	Gender, Development and Globalization	
WGST/HIST 4303	Sex and Gender in Modern Britain	
WGST/ETST 4305	Women of Color Feminisms	
WGST/ENGL/HIST 4306	Survey of Feminist Thought	
WGST/HIST 4307	History of Sexuality	
WGST/ENGL/PHIL 4308	Contemporary Feminist Thought	
WGST/HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
WGST/RLST 4420	Goddess Traditions	
WGST/PHIL 4500	Feminist Philosophy	
WGST/ENGL 4510/RLST 4730	Whores and Saints: Medieval Women	
WGST 4511/FREN 4510	French Women Writers	
WGST 4540/SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	
WGST/PSCI 4564	Gender and Politics	
WGST/COMM 4610	Communication, Media, and Sex	
WGST/COMM 4660	Queer Media Studies	
WGST/RLST 4710	Women and Religion	
WGST/PHIL 4933	Philosophy of Eros	
Total Hours		**38**

[1] These courses are examples. Students should check course descriptions and the schedule to find courses that meet this requirement.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/sociology-ba-learning-outcomes/).

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/)

Sociology, 4 + 1 BA/ MA

Introduction

Please click here (p. 829) to see Sociology department information.

The Combined BA/MA (4+1) program in Sociology provides a coherent, progressive educational experience that prepares students for either immediate entry to a master's level career or continued study in a PhD program. The BA/MA application process is competitive, as the program is designed for highly-qualified students who are capable of an expedited program. Students choose from four options for their Culminating Project that completes the master's degree: either a 6-credit thesis; a 3-credit applied experience plus a 3-credit paper; an approved fifth graduate-level elective (totaling 15 credits of electives) plus a 3-credit report; or an extended coursework path that includes 18 credits of electives (up to 9 credits outside of Sociology) , plus a final portfolio of the candidate's most representative work. The program also offers three concentration areas (Crime, Law & Deviance; Health & Society; Family, Social Services & Community) for students seeking specialization in high-demand career areas.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major and graduate advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

While students are completing a BA degree in sociology, they may also complete some of the requirements for an MA degree in sociology by participating in the BA/MA program using the following guidelines:

1. The student must apply and be accepted for participation in the BA/MA program prior to completion of the BA degree in consultation with both the undergraduate and graduate advisors. Students must complete a 4+1 intent form to formally declare this program, as they work very closely with undergraduate and graduate advisors to ensure they are on track and completing requirements as necessary.
2. Students should officially declare their intent to complete this program by their junior year and apply to the graduate program during the semester they intend to graduate with their BA.
3. Up to 12 semester hours of graduate-level course work may be taken as an undergraduate and applied toward the MA degree. With prior approval, these courses may also be applied toward the Sociology BA (p. 836).
4. Students must apply to and complete the MA in Sociology (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/sociology/sociology-ma/) requirements.
5. Students must complete a minimum of 32 SOCY credit hours.
6. Students must complete a minimum of 16 upper-division (4000-level and above) with no more than12 graduate (5000-level and above) SOCY credit hours.
7. Students must earn a minimum grade of C- (1.7) in all undergraduate courses that apply to the major and must achieve a minimum cumulative major GPA of 2.0. Students must earn a minimum grade of B (3.0) in all graduate courses that apply to the degree requirements. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to undergraduate or graduate program requirements.
8. Students must complete a minimum of 13 SOCY credit hours and all graduate level coursework with CU Denver faculty.

Code	Title	Hours
Complete the following program requirements:		
Complete all of the following required courses:		*20*
SOCY 1001	Understanding the Social World	
SOCY 2001	Inequalities in Social World	
SOCY 3115	Quantitative Methods & Analysis	
SOCY 3119	Qualitative Methods	
SOCY 3140	Sociological Theory	
SOCY 5000	Professional Seminar: Sociological Inquiry	
Complete a minimum of 12 and a maximum of 36 SOCY elective credit hours. At least three credit hours must be completed at the 4000-level or higher. A maximum of nine credit hours may be taken at the graduate level from the following list of courses		*12*
SOCY 5016	Social Theory	
SOCY 5024	Seminar: Research Methods I	
SOCY 5183	Seminar: Quantitative Data Analysis	
SOCY 5193	Seminar: Qualitative Data Analysis	
Total Hours		**32**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/combined-bama-41-program/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

Sociology Minor

Introduction

Please click here (p. 829) to see Sociology department information.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This program is offered on-campus and online.

Declaring This Minor

- Please consult with College of Liberal Arts and Sciences (CLAS) Advising.
- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 SOCY credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) SOCY credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine SOCY credit hours with CU Denver faculty.

Program Allowances and Restrictions

1. Students may count up to nine semester credits of independent study or internship coursework toward the Sociology minor.

Code	Title	Hours
Complete the following required course:		*3*
SOCY 1001	Understanding the Social World	
Complete one of the following courses:		*3*
SOCY 2001	Inequalities in Social World	
SOCY 3115	Quantitative Methods & Analysis	
SOCY 3119	Qualitative Methods	
SOCY 3140	Sociological Theory	
Complete nine additional credit hours of Sociology electives:		*9*
Total Hours		**15**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/programs/minor/).

Community Health and Medicine Undergraduate Certificate

Introduction

Please click here (p. 829) to see Sociology department information.

Enhancing the health and quality of life for individuals and communities are central goals to societies the world over. Medical sociology is a subfield devoted to the study of population health, health care systems and policy, and the social dimensions of illness and healing. Medical sociologists study the causes of health inequalities, social constructions of health and illness, origins of medical authority, doctor-patient relationships, community influences on health, and the social forces that affect policy. The Sociology Department's Community Health and Medicine Certificate provides training in the core research methodologies and theories of medical sociology, examining individual experience, institutional structures, laws and policies that affect health, and broader systems of inequality that lead to unequal rates of illness and access to care. This certificate provides depth of training in these areas and is ideal for students interested in graduate-level study and social research on health and medicine as well as those interested in careers in public health, health care services, and non-profit organizations.

Upon successful completion of the certificate, students will:

- Articulate the central explanations for historical shifts in disease, including neighborhood effects and behaviors that may increase the risk of disease and mortality
- Identify social factors that contribute to population health inequalities, including race, ethnicity, gender, class, immigration status, sexuality, or disability
- Understand the social influences that shape medical authority, knowledge, and patient experiences with illness and treatment
- Be able to use different methodologies to understand the social aspects of health and medicine
- Know how to conduct original research, analyze policy, and evaluate community needs for organizations devoted to improving population health

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

- Eligibility: While housed in Sociology, the study of health and medical issues is in fact a multidisciplinary field that draws from diverse liberal arts fields, including Anthropology, Communications, Psychology, and History, among others. Thus, CU Denver undergraduate students in any discipline can enroll in the certificate program. This certificate is also available to non-degree-seeking students who already have earned a BA or BS degree, either at CU Denver or elsewhere.
- Application procedures: Student are encouraged to contact the Director of the Community Health and Medicine Certificate at any point in their undergraduate studies to inform them of their plan to pursue this certificate. Providing their student identification number and an unofficial transcript will assist the Director in advising them. The certificate is awarded to the student upon successful completion of required coursework and an assessment exam.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Community Health and Medicine advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 15 credit hours from the approved courses below.
2. Students must complete a minimum of six upper-division (3000-level and above) SOCY credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credits applied to the certificate at CU Denver. (If students have completed a course required for the certificate elsewhere, they may add the needed credits in the form of additional elective credits drawn from the approved elective courses.)

Certificate Restrictions, Allowances and Recommendations

1. The certificate will be awarded at the end of the semester in which the student completes all required courses for the certificate.

Code	Title	Hours
Complete the following required courses: [1]		*9-11*
SOCY 3115 & SOCY 3119	Quantitative Methods & Analysis and Qualitative Methods [1]	
SOCY 3440	Medical Sociology	
Complete two of the following elective courses:		*6*
SOCY/WGST 3010	Sociology of Human Sexuality	
SOCY 3040	Drugs, Alcohol & Society	
SOCY 4050	Health Disparities	
SOCY 4110	Sociology of Health Care	
SOCY 4220	Population Change and Analysis	
SOCY/WGST 4270	Social Meanings of Reproduction	
ANTH 3045	Cannabis Culture	
ANTH 3202	Anthropology of Health Care Policy	
ANTH 4010	Medical Anthropology: Global Health	

ANTH/PBHL 4080	Global Health Practice
ANTH 4290	Anthropology and Public Health
ANTH 4300	Migrant Health
ANTH 4600	Medical Anthropology
COMM 2500	Introduction to Health Communication
COMM 4500	Health Communication
COMM 4525	Health Communication and Community
COMM 4550	Rhetorics of Medicine & Health
COMM 4558	Digital Health Narratives
COMM/PBHL 4620	Health Risk Communication
ECON 4660	Health Economics.
ENGL 4755	Illness & Disability Narrative
ETST/PBHL 3002	Ethnicity, Health and Social Justice
GEOG 3501	Geography of Health
GEOG 4235	GIS Applications in the Health Sciences
GEOG 4710	Disasters, Climate Change, and Health
HEHM 3100	Introduction to Health Humanities
HIST 3606	Science, Technology, and Society in the Modern World
HIST/WGST 4345	Gender, Science, and Medicine: 1600 to the Present
HIST 4348	Mind and Malady: A History of Mental Illness
PBHL 1001	Race, Gender, Class, & Health
PBHL 3010	Human Sexuality and Public Health
PBHL 3030	Health Policy
PBHL 3041	Health, Culture and Society
PBHL 3051	Mental Illness and Society
PBHL 3070	Perspectives in Global Health
PBHL 3081	Health in the City: Urban Health
PBHL 3091	Live Long and Prosper: Public Health & Aging
PBHL 4020	Global Health: Comparative Public Health Systems
PBHL 4040	Social Determinants of Health
PBHL/ANTH 4090	Psychedelic Anthropology
PHIL 3550	Philosophy of Death and Dying
PHIL 4242	Medicine, Health Care, and Justice: Bioethics
PSCI 4330	U.S. Health Policy
PSYC 2205	Lifespan Developmental Psychology for Health Majors
PSYC 3262	Health Psychology
PSYC 3265	Drugs, Brain and Behavior
PSYC 3305	Abnormal Psychology
PSYC 3822	Aging, Brain and Behavior
Total Hours	**15-17**

[1] Students may take two approved methods courses in their major discipline, one on quantitative methods and one on qualitative methods. Alternative courses may reduce the required course credit hours from 11 to 9.

- Examples of SOCY 3115, substitutions may include ECON 3801 Introduction to Mathematical Economics, ECON 3811 Statistics with Computer Applications, GEOG 2080 Introduction to Mapping and Map Analysis, GEOG 4080 Introduction to GIS, MATH 2830 Introductory Statistics, PHIL 2441 Logic, Language and Scientific Reasoning, PHIL 3440 Introduction to Symbolic Logic, PSCI 3011 Research Methods, PSYC 2090 Statistics and Research Methods, PSYC 3090 Research Methods in Psychology.
- Examples of SOCY 3119 substitutions may include COMM 4221 Research Methods: Qualitative, PBHL 4031 Ethnographic Research in Public Health.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/degrees-certificates/certificates/).

Criminology Undergraduate Certificate

Introduction

Please click here (p. 829) to see Sociology department information.

Crime and society's responses to it represent core concerns for social scientists, policy makers, civic leaders, community organizations, and citizens across the globe. Criminology is the field of study dedicated to understanding crime as a social phenomenon. Criminologists study the social construction of laws, nature and causes of crime, reactions to the breaking of laws, and the prevention, control and treatment of crime. The Department of Sociology's Criminology Certificate offers an essential foundation for students pursuing careers in criminal justice, victim and community services, criminal law, and non-profit organizations in local and international contexts. The certificate also prepares interested students for law school and graduate programs in sociology and criminology. Students may ultimately use this training to conduct social research on crime, influence public policy, and inform government decisions about crime and law.

Upon successful completion of the certificate, students will:

- Understand the theoretical explanations for the social and behavioral causes of crime and crime reduction
- Possess a fundamental understanding of the criminal-legal and political institutions responsible for crime control and policy
- Be familiar with current trends in criminological thought, research, and activism
- Be able to apply the technical skills of their methodological training to conduct crime analyses and outcomes assessments for programs aimed at crime prevention
- Engage in original research projects involving criminological topics

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

- Eligibility: While housed in Sociology, criminology is in fact a multidisciplinary field that draws from diverse liberal arts fields, including Psychology, Political Science, Communications, History, Philosophy, among others. Thus, CU Denver undergraduate students in any discipline can enroll in the certificate program. The certificate is also available to non-degree-seeking students who already have earned a BA or BS degree, either at CU Denver or elsewhere.
- Application procedures: Students are encouraged to contact the Director of the Criminology Certificate informing them of their wish to pursue the certificate at any point in their undergraduate studies. Providing their student identification number and an unofficial transcript will assist the Director in advising them. The certificate is awarded to the student upon successful completion of required coursework and an assessment exam.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Criminology advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 15 credit hours from the approved courses below.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credits applied to the certificate at CU Denver. If students have completed a course required for the certificate elsewhere, they may add the needed credits in the form of additional elective credits drawn from the approved elective courses.

Certificate Restrictions, Allowances and Recommendations

1. The certificate will be awarded at the end of the semester in which the student completes all required courses for the certificate.

Code	Title	Hours
Complete the following required courses: [1]		*9-11*
SOCY 3115 & SOCY 3119	Quantitative Methods & Analysis and Qualitative Methods	
SOCY 3490	Criminology	
Complete two of the following elective courses:		*6*
SOCY 2440	Deviance and Social Control	
SOCY 3040	Drugs, Alcohol & Society	
SOCY 4340	Juvenile Delinquency	
SOCY 4460	Hate Groups and Group Violence	
SOCY 4590	Crime, Justice, and the City	
SOCY 4700	Sociology of Law	
SOCY/WGST 4780	Violence in Relationships	
ANTH/PBHL 4090	Psychedelic Anthropology	
COMM 4040	Communication, Prisons, and Social Justice	
COMM 4680	Mass Media Law And Policy	
CRJU 3160	White-Collar Crime	
CRJU 3220	Community Corrections	
CRJU 3250	Violence in Society	
CRJU 3252	Violent Offenders	
CRJU 3290	Capital Punishment	

CRJU 3330	Serial Killers
CRJU 3420	Pleas, Trials and Sentences
CRJU 3510	Drugs, Alcohol, and Crime
CRJU 3540	Crime and Delinquency Prevention
CRJU 3575	Offenders With Mental Health Disorders
CRJU 4044	Courts and Judicial Process
CRJU 4120	Race, Class, and Justice
CRJU 4130	Poverty, Crime, and Justice
CRJU 4140	Interpersonal Violence
CRJU 4150	Sex Offenders and Offenses
CRJU 4170	Victimology
CRJU 4171	Homicide Studies
CRJU 4190	Gender and Crime
CRJU 4410	Criminal Law and Constitutional Procedures
CRJU 4440	Courts and Social Policy
CRJU 4520	Gangs and Criminal Organizations
CRJU 4710	Environmental Crime and Justice
ECON 3300	Economics of Crime and Punishment
ECON 3400	Economics of Sex and Drugs
ETST 3704	Culture, Racism and Alienation
HDFR 4075	Family Policy & Law
HIST/COMM 3231	Famous U.S. Trials
HIST 4308	Crime, Policing, and Justice in American History
PHIL 3280	War and Morality
PHIL 4260	Why Obey the Law? Introduction to Philosophy of Law
PHIL 4450	Punishment and Social Justice
PSCI 3034	Race, Gender, Law and Public Policy
PSCI 4185	Corruption in the U.S. and Abroad
PSCI 4427	Law, Politics and Justice
PSCI 4807	Political Violence
PSYC 3265	Drugs, Brain and Behavior
PSYC 3612	Domestic Abuse
Total Hours	**15-17**

[1] Students may substitute two approved methods courses in their major discipline, one on quantitative methods and one on qualitative methods. Questions about eligible methods course substitutions should be directed to the criminology certificate advisor. Alternative courses may reduce the required course credit hours from 11 to 9.

- SOCY 3115 Quantitative Methods & Analysis substitutions may include ECON 3801 Introduction to Mathematical Economics, ECON 3811 Statistics with Computer Applications, GEOG 2080 Introduction to Mapping and Map Analysis, GEOG 4080 Introduction to GIS, MATH 2830 Introductory Statistics, PHIL 2441 Logic, Language and Scientific Reasoning, PHIL 3440 Introduction to Symbolic Logic, PSCI 3011 Research Methods, PSYC 2090 Statistics and Research Methods, PSYC 3090 Research Methods in Psychology.
- SOCY 3119 Qualitative Methods substitutions may include COMM 4221 Research Methods: Qualitative, PBHL 4031 Ethnographic Research In Public Health.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/degrees-certificates/certificates/).

Families and Social Welfare Undergraduate Certificate

Introduction

Please click here (p. 829) to see Sociology department information.

Families play a significant part in individuals' lives and society. In sociology, one approach is to view families as a small group, focusing on relational processes like support, socialization, conflict, and intimacy that constitute interactions among family members. Another approach views the family as a major social institution that interacts closely with other institutions including those affecting education, law, healthcare, religion, the economy, criminal justice, and welfare. The family-in its varied and diverse forms-is also key to understanding how inequality is experienced and reproduced in society, as substantial responsibility for caring, nurturing, and raising others is delegated to families. The interplay of these multiple levels-the micro or interpersonal, the meso or institutional, and the macro or structural-also interest sociologists, as individuals influence social structures and institutions, and the latter, in turn, affect family interactions and relationships. This certificate provides students a foundation for understanding the complex role of families and family members at multiple levels, as well as the social systems and organizations responsible for supporting families and individuals. The content and methods courses will prepare students for direct service positions working with individuals and families (e.g., human and social services), or research, policy or advocacy positions addressing family issues (e.g., housing, violence and abuse, parenting, social welfare). Students earning the certificate also will be well-positioned to pursue advanced degrees in social work, public health, counseling, law, sociology, or related disciplines.

Upon successful completion of the certificate, students will:

- Recognize the diversity of family structures within and across cultures
- Understand the theoretical perspectives explaining family behavior and relationships, and those addressing differences in the institution of the family across cultures and over time
- Be familiar with current trends in family structure, and recent research on family functioning and well-being, and how family research informs advocacy and policy work, and social welfare programs
- Be able to apply the technical skills of their methodological training to conduct analyses about families and family life, and outcomes assessments for social welfare programs aimed at helping families
- Engage in original research projects involving family-related issues

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

- Eligibility: While housed in Sociology, the study of families and social welfare is in fact a multidisciplinary field that draws from diverse liberal arts fields, including Psychology, Political Science, Communications, and History, among others. Thus, CU Denver undergraduate students in any discipline can enroll in the certificate program. The certificate is also available to non-degree-seeking students who already have earned a BA or BS degree, either at CU Denver or elsewhere.
- Application procedures: Students are encouraged to contact the Director of the Families and Social Welfare Certificate informing them of their wish to pursue the certificate at any point in their undergraduate studies. Providing their student identification number and an unofficial transcript will assist the Director in advising them. The certificate is awarded to the student upon successful completion of required coursework and an assessment exam.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Families and Social Welfare advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 15 credit hours from the approved courses below.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all 15 credits applied to the certificate at CU Denver chosen from the approved courses below. If students have completed a course required for the certificate elsewhere, they may add the needed credits in the form of additional elective credits drawn from the approved elective courses.

Certificate Restrictions, Allowances and Recommendations

1. The certificate will be awarded at the end of the semester in which the student completes all required courses for the certificate.

Code	Title	Hours
Complete the following required courses:		*9-11*
SOCY 3115 & SOCY 3119	Quantitative Methods & Analysis and Qualitative Methods [1]	
SOCY/WGST 3700	Families and Society	
Complete two of the following elective courses: [2]		*6*
SOCY/WGST 3010	Sociology of Human Sexuality	
SOCY/WGST 3080	Sex and Gender	

SOCY/WGST 4270	Social Meanings of Reproduction
SOCY 4640	Sociology of Childhood and Adolescence
SOCY/WGST 4780	Violence in Relationships
ANTH 4200	Gender in Cross-Cultural Perspective
CHIN 1000	China and the Chinese
CHIN 3200	Contemporary Chinese Society and Culture
COMM 1041	Interpersonal Communication
COMM 3275	Family Communication
COMM 4262	Mediation
ECON 1010	Economics of Social Issues
ECON 3100	Economics of Race and Gender
ECON 4210	Public Finance
ETST 3125	Multiracial Families and Communities
ETST 3230	African American Family
HDFR 2000	Introduction to Family and Community Services
HDFR 3250	Families in Global Perspectives
HDFR 4010	Family and Cultural Diversity
HDFR 4040	Latino Families in School and Communities
HDFR 4045	Abuelos (Grandparents) Latino Families
HDFR 4075	Family Policy & Law
HDFR 4260	Family Systems and Social Justice
HDFR 4300	Families in Later Life
HDFR 4888	LGBTQ Family Systems
HIST/WGST 3343	Women & Gender in US History
HIST 3488	Tudor-Stuart England
HIST 4219	Depression, Affluence and Anxiety: U.S. History, 1929 to the Present
HIST 4222	U.S. Society and Thought to 1860
HIST 4223	U.S. Society and Thought Since 1860
HIST/WGST 4303	Sex and Gender in Modern Britain
HIST 4492	United States History, 1919-1945
HIST 4493	United States History, 1945-1973
HIST 4494	Red and Blue America: U.S. History, 1973-Present
PBHL 4110	Public Health Perspectives On Family Violence
PHIL 3200	Justice, Freedom, and Power: Social and Political Philosophy
PSCI 4009	Politics of the Budgetary Process
PSCI 4024	State Politics: Focus Colorado
PSCI 4084	Local Government and Administration
PSCI 4085	Comparative Governance: Environment and Society
PSYC 3205	Human Development I: Child Psychology
PSYC 3215	Human Development II: Adolescence and Adulthood
PSYC 3235	Human Sexuality
PSYC 3405	Family Psychology
PSYC 3612	Domestic Abuse
PSYC 4485	Psychology of Cultural Diversity
Total Hours	**15-17**

[1] Students may substitute two approved methods courses in their major discipline, one on quantitative methods and one on qualitative methods. Questions about eligible methods course substitutions should be directed to the criminology certificate advisor. Alternative courses may reduce the required course credit hours from 11 to 9.

- SOCY 3115 Quantitative Methods & Analysis substitutions may include ECON 3801 Introduction to Mathematical Economics, ECON 3811 Statistics with Computer Applications, GEOG 2080 Introduction to Mapping and Map Analysis, GEOG 4080 Introduction to GIS, MATH 2830 Introductory Statistics, PHIL 2441 Logic, Language and Scientific Reasoning, PHIL 3440 Introduction to Symbolic Logic, PSCI 3011 Research Methods, PSYC 2090 Statistics and Research Methods, PSYC 3090 Research Methods in Psychology.
- SOCY 3119 Qualitative Methods substitutions may include COMM 4221 Research Methods: Qualitative, PBHL 4031 Ethnographic Research In Public Health

[2] Prerequisites may apply.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sociology/degrees-certificates/certificates/).

Justice, Allyship, Diversity and Equity Undergraduate Certificate

Introduction

Please click here (p. 829) to see Sociology department information.

The goals of the Justice, Allyship, Diversity, and Equity (JADE) undergraduate certificate are three-fold: 1) to facilitate students' understanding of and critical thinking about social inequalities and how various people have been systematically marginalized due to race, ethnicity, gender, sexual orientation, disability status, socioeconomic status, immigration status, religion, and age among other characteristics; 2) to train students to use data to analyze and understand social inequalities; and 3) to equip students with practical strategies and analytical skills for promoting and implementing policies and actions that foster social justice and human equity in educational, community, business, legal and other organizational settings. JADE certificate holders will be trained for a diverse world and workplace, and equipped with substantive knowledge and analytic skills to dismantle oppressive systems. The certificate will prepare students to act as inclusive leaders in diverse organizations within the business, human resources, legal, nonprofit, educational, and public administration sectors.

Program Delivery

- This is an on-campus or online program.

Declaring This Certificate

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Justice, Allyship, Diversity, and Equity (JADE) advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credit hours from the approved courses below.
2. Students must complete a minimum of six upper-division (3000-level and above) credit hours from approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credits applied to the certificate at CU Denver. (If students have completed a course required for the certificate elsewhere, they may add the needed credits in the form of additional elective credits drawn from the approved elective courses.)

Certificate Restrictions, Allowances and Recommendations

1. The certificate will be awarded at the end of the semester in which the student completes all required courses for the certificate.

Code	Title	Hours
Complete the following required course:		*3*
SOCY 2001	Inequalities in Social World	
Complete two of the following courses focused on addressing justice, diversity, and equity issues:		*6*
CLDE 1000	Language, Identity, & Power: International Perspectives	
CLDE 2000	CLDE Foundations	
CLDE 4020	Responsive Classroom Communities	
COMM 3271	Communication and Diversity	
COMM 4152	Religion & Communication	
COMM 4265	Gender and Communication	
COMM 4268	Communication and Diversity in U.S. History	
COMM 4270	Intercultural Communication	
CRJU 3290	Capital Punishment	
CRJU 4120	Race, Class, and Justice	
CRJU 4130	Poverty, Crime, and Justice	
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	
ENGL 4755	Illness & Disability Narrative	
ENVS 1342	Environment, Society and Sustainability	
ETST 3125	Multiracial Families and Communities	
FINE 1002	International Perspectives through Animation	
FINE 1450	Visual Culture: Ways of Seeing	
FINE 3636	Through the Lens: Photography and Diversity	
FINE 4980	Gender in Contemporary Art	
FITV 3611	Drama of Diversity	
GEOG 3412	Globalization and Regional Development	
GEOG 4220	Environmental Impact Assessment	
GEOG 4265	Sustainability in Resources Management	
GEOG 4335	Contemporary Environmental Issues	
HDFR 1030	Who am I? Cultural Identity, Family, Diverse Soc Sys	
HDFR 3020	Black and Latino Children in Families and Schools	
HDFR 4010	Family and Cultural Diversity	
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4500	Diversity, Inclusion, Social Justice in Higher Education	
HDFR 4888	LGBTQ Family Systems	
HIST 4226	Capitalism in America	
HIST 4308	Crime, Policing, and Justice in American History	
HIST 4415	Social Revolutions in Latin America	
HIST/RLST 4462	Islam in Modern History	
HIST 4494	Red and Blue America: U.S. History, 1973-Present	
MGMT/INTB 4400	Environments of International Business	

MKTG 3200	Consumer Behavior
MKTG/INTB 4200	International Marketing
MTED 4301	Assessment and Equity in Mathematics Instruction
PBHL 1001	Race, Gender, Class, & Health
PBHL 2001	Introduction to Public Health
PBHL/ETST 3002	Ethnicity, Health and Social Justice
PBHL 3091	Live Long and Prosper: Public Health & Aging
PSCI 3034	Race, Gender, Law and Public Policy
PSCI 3035	Political Movements: Race and Gender
PSCI 4075	Gentrification and Social Equity
PSCI 4207	Theories of Social and Political Change
PSYC 4485	Psychology of Cultural Diversity
RLST 4000	Religion and Cultural Diversity
RLST/ ETST 4030/ HIST 4209	Race, Religion and Belonging in the United States
RLST/INTS/ COMM 4152	Religion & Communication
SCED 4340	Equity & Culture in Science Education: Local/ Global
SOCY 3001	Urban Sociology
SOCY/WGST 3010	Sociology of Human Sexuality
SOCY 3020	Race and Ethnicity in the U.S.
SOCY 3050	Sociology of Education
SOCY/WGST 3080	Sex and Gender
SOCY 3300	Social Problems
SOCY/ETST 3697	Contemporary Asian American Experience
SOCY 3720	Global Perspectives on Social Issues
SOCY/ETST 4020	Race, Culture and Immigration
SOCY 4050	Health Disparities
SOCY 4290	Aging, Society and Social Policy
SOCY 4440	Poverty and Social Inequality
SOCY 4460	Hate Groups and Group Violence
SOCY 4590	Crime, Justice, and the City
Complete one of the following courses focused on addressing DEI skills/ tools:	*3*
ARAB 1010	Beginning Arabic I
ARAB 1020	Beginning Arabic II
ARAB 2110	Intermediate Arabic I
ARAB 2120	Intermediate Arabic II
CHIN 1010	Beginning Chinese I
CHIN 1020	Beginning Chinese II
CHIN 1071	Mandarin Chinese for the Professions
CHIN 2110	Second Year Chinese I
CHIN 2120	Second Year Chinese II
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM
CLDE 4700	Social Studies for Multilingual Learners
COMM 2020	Communication, Citizenship, and Social Justice
COMM 2045	Workplace Communication
COMM 4240	Organizational Communication
COMM 4262	Mediation
ETST 4165	Cultural Diversity Awareness in the Workplace
FREN 1001	French Language I
FREN 1002	French Language II
FREN 2001	Second-Year French
GRMN 1010	Beginning German I
GRMN 1020	Beginning German II
LATN 1010	Elementary Latin I
LATN 1020	Beginning Latin II
LATN 2010	Intermediate Latin I
LATN 2020	Intermediate Latin II
MGMT 3000	Managing Individuals and Teams
MGMT 4100	Leveraging Diversity and Inclusion in Business
PBHL 4031	Ethnographic Research In Public Health
PSCI 4274	Conflict Resolution and Public Consent Building
PSCI 4414	Non-Profits and Social Change
SOCY 3115	Quantitative Methods & Analysis
SOCY 3119	Qualitative Methods
SPAN 1010	Beginning Spanish I
SPAN 1020	Beginning Spanish II
SPAN 1070	Spanish Medical Conversation for Beginners
SPAN 2070	Spanish Medical Conversation for Beginners II
SPAN 2110	Second Year Spanish I
SPAN 2120	Second Year Spanish II
Total Hours	**12**

The Learning Outcomes for the certificate:

1. Understand how justice, allyship, diversity, and equity intersect

2. Recognize the diversity of experiences and perspectives across social groups and cultures

3. Identify factors that contribute to historic and contemporary social inequalities across multiple dimensions including race, ethnicity, gender, sexual orientation, disability status, socioeconomic status, immigration status, religion, and age

4. Apply foundational theoretical perspectives on the reproduction of inequality in institutional structures, laws, and policies

5. Critically analyze the metrics used for monitoring and evaluating, and promoting diversity, equity, and inclusion in organizational contexts

6. Develop skills to advocate for, implement and assess policies and actions aimed at fostering justice and inclusion in a variety of social and organizational contexts

Sustainability

Director: David Knochel
Office: North Classroom 3016 D
Telephone: 303-315-7534
Email: david.knochel@ucdenver.edu

Overview

Questions of sustainability are currently among the most important facing humankind and are receiving tremendous attention in the media. Because issues of sustainability do not arise from single causes, nor can solutions be developed from within narrow disciplinary frameworks, a multidisciplinary perspective is not only desirable but necessary to identify and understand problems, and create, evaluate and implement solutions.

Specializations in this critical area of study include: health and the environment, sustainable ecology, environmental ethics, environmental policymaking and policy analysis, institutional behavior, community-based and participatory approaches to sustainable development and conservation, environmental justice, sustainable food production and critical consumerism. The sustainability minor offers a holistic approach to development and daily living, which demands scientific, economic, environmental and social perspectives to understand and implement actions that can inform the public, business, industry, government and service organizations on how their activities affect the environment.

Click here (p. 851) to learn about the requirements for the Minor in Sustainability.

Programs Offered

- Sustainability Minor (p. 851)

Faculty

Professors:

Stephen Koester, Anthropology
Diana F. Tomback, Integrative Biology

Associate Professors:

Steven R. Beckman, Economics
John Brett, Anthropology
Greg Cronin, Integrative Biology
Larry Erbert, Communication
Randall P. Tagg, Physics
Deborah S. K. Thomas, Geography
John W. Wyckoff, Environmental Sciences

Assistant Professors:

Laurel Hartley, Integrative Biology
Rafael Moreno-Sanchez, Geography
Bryan S. Wee, Geography

Sustainability (SUST)

SUST 3010 - Sustainability: Past, Present, and Future (3 Credits)
This course draws on theoretical perspectives to critically analyze contemporary environmental issues across ecological, sociocultural, historical, political and economic contexts. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SUST 3011 - Toward a Sustainable Future (3 Credits)
This is the second of a two-course sequence that examines the interrelations among the historical, political, cultural, ecological, and economic aspects of contemporary environmental issues. SUST II provides students with theoretical perspectives on sustainability through a series of current, problem-oriented case studies. Note: this course assumes that students have completed 1 Natural Science Core course and 1 Social Science Core course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SUST 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

SUST 3939 - Internship (1-3 Credits)
This course will provide internships with agencies, businesses and programs involved in initiatives aimed at promoting a sustainable future. Internships could include work with concerns involved in addressing specific environmental issues or with projects aimed at raising awareness of issues related to sustainability. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SUST 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

SUST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

SUST 4960 - Capstone in Sustainability (3 Credits)
As the culmination of the Sustainability Minor, this course examines current research practices in sustainability and sustainability-related fields. Students work in teams to complete a sustainability/sustainability-related research paper and poster and present it to the campus community. Note: Topics variable depending on region under study, student interest, and faculty specialty. Prereq: SUST 3011. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SUST 3011
Typically Offered: Fall.

SUST 4995 - Global Study Topics (1-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Sustainability Minor

Introduction

Please click here (p. 849) to see Sustainability department information.

The sustainability minor is interdisciplinary, drawing on the expertise across CLAS departments: anthropology, biology, chemistry, communication, economics, environmental sciences, geography, geology, history, economics, philosophy, physics and political science. The core courses are taught by a faculty team who will present sustainability concepts from socio-ecological and systems perspectives.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Please see your advisor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 18 credit hours chosen from the approved courses.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours in the minor, from the approved courses.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine credit hours with CU Denver faculty chosen from the approved courses below.

Program Restrictions, Allowances and Recommendations

1. Students should consult with the Sustainability advisor before registering for any courses applicable toward the minor. *Graduate-level courses and cross-lists may be used with prior consent from the advisor.
2. Credits counted for another major or minor program can be counted toward the Sustainability Minor with approval from the advisor, though no course may be used to fulfill more than two graduation requirements.

Code	Title	Hours
Complete the following required courses:		*9*
ENVS 1342	Environment, Society and Sustainability	
SUST 3010	Sustainability: Past, Present, and Future	
SUST 4960	Capstone in Sustainability	
Take three courses (nine credit hours) from the following list of pre-approved elective courses.		*9*
Anthropology (p. 851)		
Architecture (p. 851)		
Biology (p. 851)		
Business (p. 852)		
Chemistry (p. 852)		
Communication (p. 852)		
Economics (p. 852)		
Environmental Sciences (p. 852)		
Geography/Geology (p. 852)		
History (p. 852)		
Physics (p. 852)		
Philosophy (p. 852)		
Political Science (p. 853)		
Public Health (p. 853)		
Total Hours		**18**

Anthropology

Code	Title	Hours
ANTH 1302	Introduction to Archaeology	
ANTH 1303	Introduction to Biological Anthropology	
ANTH 2102	Culture and the Human Experience	
ANTH 3301	World Prehistory	
ANTH 3512	Human Evolution	
ANTH 4560	Human Ecology	

Architecture

Code	Title	Hours
ARCH 3700	Special Topics Design (topic must be approved by Sustainability minor advisor)	
ARCH 3705	Advanced Human Centered Design, Innovation and Prototyping	

Biology

Code	Title	Hours
BIOL 1550	Basic Biology: Ecology and the Diversity of Life	
BIOL 3330	Plant Diversity	
BIOL 3411	Principles of Ecology	
BIOL 3521	Vertebrate Biology	
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab	
BIOL 4154	Conservation Biology	
BIOL 4335	Plant Structure and Development	
BIOL 4345	Flora of Colorado	

BIOL 4415	Applied Microbial Ecology
BIOL 4425	Biogeography

Business

Code	Title	Hours
MGMT 4950	Special Topics in Management (topic must be approved by Sustainability minor advisor)	
MKTG 4950	Special Topics (topic must be approved by Sustainability minor advisor)	

Chemistry

Code	Title	Hours
CHEM 1474	Core Chemistry: Chemistry for Everyday	
CHEM 4700	Environmental Chemistry	

Communication

Code	Title	Hours
COMM/INTS 4611	Rhetoric of Global Food Policy	

Economics

Code	Title	Hours
ECON 4530	Economics of Natural Resources	
ECON 4540	Environmental Economics	
ECON 4770	Development Economics	

Environmental Sciences

Code	Title	Hours
ENVS 1044	Introduction to Environmental Sciences	
ENVS/PHYS 3082	Energy and the Environment	

Geography/ Geology

Code	Title	Hours
GEOG 1102	World Regions Global Context	
GEOG 1202	Introduction to Physical Geography	
GEOG 1602	Urban Studies and Planning	
GEOG/ENVS 3232	Weather and Climate	
GEOG 3412	Globalization and Regional Development	
GEOG/GEOL 4010	Landscape Biogeochemistry	
GEOG/GEOL 4020	Earth Environments and Human Impacts	
GEOG 4060	Remote Sensing I: Introduction to Environmental Remote Sensing	
GEOG 4080	Introduction to GIS	
GEOG 4085	GIS Applications for the Urban Environment	
GEOG 4090	Environmental Modeling with Geographic Information Systems	
GEOG 4230	Hazard Mitigation and Vulnerability Assessment	
GEOG 4265	Sustainability in Resources Management	
GEOG 4280	Environmental Hydrology	
GEOG 4301	Population, Culture, and Resources	
GEOG 4305	Water Quality and Resources	
GEOG 4335	Contemporary Environmental Issues	
GEOG 4350	Environment and Society in the American Past	
GEOG 4420	The Politics of Nature	
GEOG 4450	Urban Food and Agriculture: Perspectives and Research	
GEOG 4640	Urban Geography: Denver and the U.S.	
GEOG/ENVS 4720	Climate Change: Causes, Impacts and Solutions	

History

Code	Title	Hours
HIST/ETST 3297	Social History of Asian Americans	
HIST 3345	Immigration and Ethnicity in American History	
HIST/ETST 3350	Colonial Latin America	
HIST 3360	Denver History	
HIST 3366	Nature and Power in American History	
HIST/ETST 3396	History of the American Indian	
HIST 3451	Introduction to African History	
HIST 3460	Modern Latin American History	
HIST 3470	Intro to East Asia: Since 1800	
HIST 3480	Introduction to European History	
HIST 3606	Science, Technology, and Society in the Modern World	
HIST 4032	Globalization in World History Since 1945	
HIST 4217	Consumer Culture	
HIST 4226	Capitalism in America	
HIST 4227	American West	
HIST 4236	Colorado Mining and Railroads	
HIST 4240	National Parks History	
HIST/ETST 4411	Modern Mexico	
HIST 4417	Commodities and Globalization	
HIST 4421	Modern China	
HIST 4431	Modern Japan	
HIST 4451	Southern Africa	
HIST 4461	The Modern Middle East	
HIST 4503	Topics in History of Science	
HIST 4504	Animals in U.S. History	

Physics

Code	Title	Hours
PHYS 3082	Energy and the Environment	
PHYS 4400	Scientific Instrumentation	

Philosophy

Code	Title	Hours
PHIL 3430	How to think green: Environmental Ethics	

Political Science

Code	Title	Hours
PSCI 3022	Political Systems of the World	
PSCI 3034	Race, Gender, Law and Public Policy	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3042	World Politics	
PSCI 3914	The Urban Citizen	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4014	Media and Politics	
PSCI 4025	Local Governance and Globalization	
PSCI 4085	Comparative Governance: Environment and Society	
PSCI/ETST 4144	Indigenous Political Systems	
PSCI/ETST 4146	Indigenous Politics	
PSCI 4206	Social Movements, Democracy and Global Politics	
PSCI 4207	Theories of Social and Political Change	
PSCI/WGST 4215	Women's Rights, Human Rights: Global Perspectives	
PSCI 4216	International Politics: Human Rights	
PSCI 4226	The United Nations in World Affairs	
PSCI/WGST 4248	Gender, Development and Globalization	
PSCI 4276	Conflicts and Rights in International Law	
PSCI 4326	Advanced International Political Economy: Globalization	
PSCI 4354	Environmental Politics	
PSCI 4365	Global Ecological Crises	
PSCI 4545	Immigration Politics	
PSCI 4645	Comparative Political Leadership	
PSCI 5217	Human Rights: Theory and Practice	
PSCI 5468	Research Methods in Political Science	

Public Health

Code	Title	Hours
PBHL 3020	Introduction to Environmental Health	

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/sustainability/).

Women's and Gender Studies

Director: Sarah Hagelin (English)
Graduate Advisor: Margaret Woodhull (Humanities)
Office: 1050 9th Street, #102
Telephone: 303-556-5835

Overview

Women's and Gender Studies (WGST) is an interdisciplinary program that focuses on the centrality of gender and sexuality to understanding our past and present worlds. Students and faculty probe assumptions about men and women and question structures of inequality as they play out in local and global contexts. Through a study of gender and sexuality, we expand our thinking about other relations of power, such as race, class, ethnicity, nationality and physical ability. WGST fosters connections with the local community and promotes advocacy of human rights and social justice.

Undergraduate Information

Click here (p. 859) to learn about the requirements for the Minor in Women's and Gender Studies.

Individually Structured Major

Students interested in a major in Women's and Gender Studies may develop one through the Individually Structured Major (ISM). The ISM is an interdisciplinary major based on an individual contract rather than a preset list of courses. By choosing an ISM, students can pursue their interests in WGST across a variety of departments. For more information on an ISM in Women's and Gender Studies, contact Associate Dean Marjorie Levine-Clark and see the Individually Structured Major (p. 588) section of this catalog.

Graduate Information

Please go to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/womens-gender-studies/) catalog to read about our graduate programs.

Programs Offered

- Women's and Gender Studies Minor (p. 859)

Associated Faculty

Joanne Addison (English)
Chris Agee (History)
Elizabeth Allen (Psychology)
Laura Argys (Economics)
Pompa Banerjee (English)
Soumia Bardhan (Communication)
Nicky Beer (English)
Michelle Comstock (English)
Candan Duran-Aydintug (Sociology)
Paula Espinoza (Ethnic Studies)
Sarah Fields (Communication)
Sarah Hagelin (English)
Rachel Harding (Ethnic Studies)
Amy Hasinoff (Communication)
Joanna Luloff (English)
Donna Langston (Ethnic Studies)
Marjorie Levine-Clark (History)
K. Mohrman (Ethnic Studies)
Candice Shelby (Philosophy)
Gillian Silverman (English)
Sarah Tyson (Philosophy)
Cate Wiley (English)
Margaret Woodhull (Humanities)

Women Studies (WGST)

WGST 1050 - Introduction to Women's and Gender Studies (3 Credits)
This course provides an introduction to key concepts, themes and approaches to the interdisciplinary field of women's and gender studies. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

WGST 2900 - Smart Girl Leadership Training and Practicum (3 Credits)
Provides leadership and mentoring training, and a practicum in which UCD students mentor teenagers in their community or school settings. Following completion of the training, students work as near-peer mentors and coaches with groups of teenage girls in the Denver community and apply the skills learned in their training. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 3010 - Sociology of Human Sexuality (3 Credits)
Increases the understanding of differences in views of sexuality, specifically the link between sex and reproduction and its role as the motivation for gender roles and sex acts. Explores the history of sexuality, cross-cultural studies and primate modeling. Cross-listed with SOCY 3010. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3020 - Gender, Sexuality and Race in American Popular Culture (3 Credits)
This course explores the impact of popular culture on the lived experience of diverse women and men in America. Students will examine how cultural media (including film, television, print ads, music & digital games) can both reproduce and challenge existing structural inequalities. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

WGST 3080 - Sex and Gender (3 Credits)
Causes and consequences of sex role differentiation at the individual, group and societal levels. Current issues related to changing norms and values concerning gender in modern society are examined. Cross-listed with SOCY 3080. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3343 - Women & Gender in US History (3 Credits)
This course will explore women and gender as drivers of US history. From politics to popular culture, jobs to sexual empowerment, civil rights to economic restructuring, we will use gender as a lens to re-envision familiar stories about American history. Cross-listed with WGST 5343, HIST 3343, and HIST 5343. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3450 - Contemporary Women Writers (3 Credits)
Examines how women write about a specific theme, such as home, work, family, the "other," as well as how women's writing may differ from men's. Theme and genre vary. Prereq: sophomore standing or higher. Cross-listed with ENGL 3450. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

WGST 3700 - Families and Society (3 Credits)
This course explores multiple dimensions of family as a social institution. Using a critical approach, we examine historical, cultural, and political views about families. We consider multiple forms of contemporary families, discuss the many issues facing families, and study how families and family life have become politicized. Cross-listed with SOCY 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3840 - Independent Study: WGST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA

WGST 4010 - Special Topics in Women's and Gender Studies (1-3 Credits)
Examines current topics in the field of Women's studies and Gender studies. Topics vary from term to term. May be repeated as long as the topic is distinct and different from courses student has already received credit for. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

WGST 4150 - Gender Politics in the Middle East: Beyond Orientalism & Islamism (3 Credits)
This course is about Middle Eastern women's subjectivity and various forms of agency. It explores the nexus of domestic, regional and international forces that shapes the lives of Middle Eastern women, in particular in the Algerian, Egyptian, Iranian, Israeli and Palestinian contexts. Far from being silent observers of the contests among these forces, as is often assumed, Middle Eastern women have been active actors in the public arena since the 19th century colonial encounter and the importation of the modern state to the region using an array of means to make their voices heard. Theirs were often more militant than those of their countrymen. The course is divided into two parts. The first part provides an overview of the theoretical notions discussed such as Orientalism, agency, colonialism and post-colonialism. Related to this theoretical section is a historical overview that is necessary to the understanding of the contemporary conditions of Middle Eastern women and the continuities and changes between past and present. The second part covers pressing topics in the lives of Middle Eastern women in the post-independence era such as the rise of Political Islam, the global trend of democratization, war and occupation. The emphasis in this section is on women as active participants in the debates surrounding these issues, rather than as objects of them. The readings assigned include both texts written by scholars from the region and by others from without. They provide analyses of the contexts within which Middle Eastern women's struggles take place. In addition, students will be exposed to materials produced by Middle Eastern women activists that express their own opinions and views in order to avoid misrepresentation and to reflect the diversity among them. Cross-listed with PSCI 4150. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4215 - Women's Rights, Human Rights: Global Perspectives (3 Credits)
Explores the global feminist movement's campaign to "engender" human rights. Examination of women's human-rights issues and the critique of this campaign as representing cultural imperialism. Prereq: 6 hours of political science or permission of instructor. Cross-listed with PSCI 4215. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4225 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color – all fought for their own "right to the city". Cross-listed with HIST 4225, HIST 5225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4230 - Women in the West (3 Credits)
Focuses on ways in which women, from the mid-19th century through the mid-20th century, of different races, classes, and ethnic background, have interacted and been active participants in the development of the western states. Cross-listed with HIST 4230, HIST 5230 and WGST 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4248 - Gender, Development and Globalization (3 Credits)
Examining the cost and impact of globalization; not only on women and gender but economic equality, human movement and displacement, sustainable development and the environment. Highlighting the complexities of a highly interconnected world and intersectional nature of a globalized world, answering the question: Who Wins? Who Loses? Cross-listed with PSCI 4248, PSCI 5245 and WGST 5248. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4270 - Social Meanings of Reproduction (3 Credits)
Reproduction involves more than biological processes, assuming symbolic, political, and ideological meanings. This course examines contested meanings of reproduction, including how people experience reproduction, controversies over who should reproduce (and under what circumstances), and how public policy mediates these conflicts. Cross-listed with SOCY 4270, SOCY 5270 and WGST 5270. Prereq: junior standing or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

WGST 4303 - Sex and Gender in Modern Britain (3 Credits)
Examines modern British history by focusing on sex and gender as central aspects in people's lives. Considers the ways gender shapes the realms of politics, economics, society and culture in Britain from the 18th century to the present. Cross-listed with HIST 4303/5303 and WGST 5303. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4305 - Women of Color Feminisms (3 Credits)
This course is an overview of women of color feminist theorizing (thinking) and praxis (practice) in the U.S. We will explore these feminisms through the writing, art, and organizing efforts of women and trans, femme, and non-binary people of color with a focus on key themes and concepts including identity, difference, oppression, intersectionality, representation, violence, resistance, empowerment, solidarity, and coalition. Texts for the course highlight key issues in the feminist theorizing and praxis of Black, Latina/x, Chicana/x, Asian (American), Pacific Islander, Indigenous, and Arab (American) women and trans, femme, and non-binary people of color, especially the politics of identity and representation; structural oppressions and violences; and practices of survival, resistance, and activism. Not only will we examine how these feminists have critiqued oppression(s) based on race, class, gender, sexuality, nationality, and religion, (as well as how these systems of domination intersect), but what kinds of approaches, strategies, and changes these thinkers and activists have organized for and promoted. Cross-listed with WGST 5305, ETST 4305 and ETST 5305. Max hours: 3 Credits
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 4306, 5306, HIST 4306, 5306, WGST 5306. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4307 - History of Sexuality (3 Credits)
Explores the relationships between gender and norms, sexual practice, and ideas about sexuality in Europe and the United States. Examines how sex and sexuality have changed over time and how those changes relate to social, cultural, political and economic history. Cross-listed with HIST 4307/5307 and WGST 5307. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 4308, ENGL 5308, PHIL 4308, PHIL 5308, WGST 5308. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4345 - Gender, Science, and Medicine: 1600 to the Present (3 Credits)
Examines the ways science and medicine have both shaped and been shaped by ideas about gender. Pays particular attention to the relationship between scientific/medical ideas about the sexes and the social organization of gender. Cross-listed with HIST 4345/5345 and WGST 5345. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4420 - Goddess Traditions (3 Credits)
Explores the many forms which Goddesses have assumed through history, including the Neolithic Great Mother and her heiresses in the ancient Mediterranean cultures, such as: Isis, Ishtar, Demeter, Hecate, Aphrodite, Artemis, Athena and others, and their parallels in India. Goddess traditions have encompassed a full spectrum from virgins to Great Mothers to dark underworld Goddesses of death and destruction. Cross-listed with RLST 4420/5420 and WGST 5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4494 - Red and Blue America: U.S. History, 1973-Present (3 Credits)
This course explores American history during a period of immense cultural and political polarization. After 1973, the United States experienced the rise of the New Right, changing attitudes towards sexual "permissiveness," and rapid advancements in technology. Both "law-and-order" politics and the rights campaigns led by immigrants, women, people of color, and LGBTQ+ peoples all reshaped democracy. These developments in the United States, meanwhile, influenced and were shaped by the nation's "hot" and "cold" conflicts in Europe, Latin America, the Middle East, and the rest of the globe. Cross-listed with WGST 5494, HIST 4494, and HIST 5494. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

WGST 4500 - Feminist Philosophy (3 Credits)
Seminar on key debates & figures in historical & contemporary feminist philosophy. Topics may include: rights, embodiment, gender, sexuality, race, reason, & violence. Figures may include: Wollstonecraft, Stanton, Beauvoir, Judith Butler, and bell hooks. Cross-listed with WGST 5500, PHIL 4500 & 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4510 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. Prereq: Nine hours of literature courses or instructor permission. Cross-listed with ENGL 4510/5510, RLST 4730/5730 and WGST 5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4511 - French Women Writers (3 Credits)
Designed to explore writings by French and Francophone women from the Middle Ages to the present. Addresses the question of what it means to be a woman and want to write. The selections include a wide variety of genres: autobiographical writings, stories, poems, manifestos, letters, political and historical documents. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 4510/5510 and WGST 5511. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4540 - Race, Class, and Gender in Spanish Golden Age Literature (3 Credits)
Explores works of various genres in relation to their social and political contexts in 16th and 17th century Spain, emphasizing the cultural attitudes toward race, class, and gender that inform them. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 4340/5340 and WGST 5540. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

WGST 4555 - International Women's Resistance (3 Credits)
Examines local and international struggles of women to build peace and justice by resisting systems of inequality such as colonialism, racism, patriarchy, globalization, and religious intolerance. Cross-listed with PSCI 4555/5555, ETST 4555 and WGST 5555. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4564 - Gender and Politics (3 Credits)
Analysis of the political experience of women and of strategies for change. Emphasis on the U.S. Cross-listed with PSCI 4564. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4610 - Communication, Media, and Sex (3 Credits)
This class develops the tools to think critically about representations of sexuality and to understand the social construction of sexuality, the role of sexual representations in mass media and society, and the complex relationships between sexual acts, identities, and desires. Restriction: Restricted to class level Junior, Senior, or permission of instructor. Cross-listed with COMM 4610. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

WGST 4660 - Queer Media Studies (3 Credits)
Queer Media Studies, a discussion-based seminar, investigates the history of a variety of LGBTQ+ media — including news, film, television, comics, games, music, and the Internet. Students engage in a variety of media projects to explore LGBTQ+ histories, queer aspects of media production, reception, and media messages. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 4660, COMM 5660, WGST 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

WGST 4710 - Women and Religion (3 Credits)
A sociological exploration of the contemporary roles of women in religion. Course examines American and world religious groups with an eye to women's involvement. Considers how women have changed these traditions as they take on leadership roles and discusses the tensions that arise within these traditions as a result of their expanded participation. Cross-listed with HUMN 5710, SSCI 4710/5710, WGST 5710, RLST 4710/5710. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SJUS 4770, SSCI 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

WGST 4780 - Violence in Relationships (3 Credits)
Course focuses on the study of violence among individuals involved in intimate relationships; factors in society such as norms, laws and institutions that are related to creating violence among intimates; and social policies, prevention, intervention and treatment programs. Cross-listed with SOCY 4780, SOCY 5780 and WGST 5780. Prereq: junior standing or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

WGST 4827 - Women and the Law (3 Credits)
Examines the role of the courts in the development of public policy toward women; how the legal system affects the economic power, family roles, safety and political participation of women. Cross-listed with PSCI 4827 and ETST 4827. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

WGST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 4933 - Philosophy of Eros (3 Credits)
What does it mean to understand philosophy as an erotic activity? This question will be examined, first by studying Plato's dialogues-such as Lysis, Symposium and Republic-and then by reading texts from Sigmund Freud, Michael Foucault and others. Cross-listed with PHIL 4933/5933, WGST 5933, SSCI 5933 and HUMN 5933. Max hours: 3 Credits.
Grading Basis: Letter Grade

Women's and Gender Studies Minor

Introduction

Please click here (p. 854) to see Women's and Gender Studies department information.

The Women's and Gender Studies Minor gives students the opportunity to explore gender issues in the humanities and social sciences.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

For more information about this minor, contact the Women's and Gender Studies Director, Sarah Hagelin, 303-556-4529.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (p. 380) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 18 WGST-related credit hours.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours in the minor, chosen from the approved courses below.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of 12 credit hours with CU Denver faculty chosen from the approved courses below.

Program Restrictions, Allowances and Recommendations

1. All courses for the minor must be approved by a WGST advisor. Students may double count up to six credits being applied to other graduation requirements (major, certificate or general education).
2. Students are strongly urged to take at least one course that focuses on international perspectives on women's and gender issues.
3. Students have the option to complete an internship working in the community around issues related to women and gender. The alternative to this is a WGST capstone course at the 4000 level.
4. Students who major in Sociology and complete the Gender and Society option (p. 837) will automatically earn a Women's and Gender Studies Minor

Women's and Gender Studies Minor Requirements

Code	Title	Hours
Complete the following required course:		*3*
WGST 1050	Introduction to Women's and Gender Studies	
Complete 12 credit hours of WGST-related courses at the 3000-level or above. Eligible courses include, but are not limited to:		*12*
HUMANITIES		
ENGL 4000	Studies of Major Authors (depending on author being studied; e.g., Virginia Woolf, Jane Austen, Margaret Atwood, George Sand, etc.)	
ENGL 4290	Rhetoric and the Body	
ETST 4768	Chicano/Chicana Narrative and Social History	
PHIL 3500	Ideology and Culture: Racism and Sexism	
RLST 4000	Religion and Cultural Diversity	
WGST 3020	Gender, Sexuality and Race in American Popular Culture	
WGST/HIST 3343	Women & Gender in US History	
WGST/ENGL 3450	Contemporary Women Writers	
WGST 4010	Special Topics in Women's and Gender Studies	
WGST/ HIST 4225/ GEOG 4625	Urban America	
WGST/HIST 4230	Women in the West	
WGST/HIST 4303	Sex and Gender in Modern Britain	
WGST/ENGL/ HIST 4306	Survey of Feminist Thought	
WGST/HIST 4307	History of Sexuality	
WGST/ENGL/ PHIL 4308	Contemporary Feminist Thought	
WGST/HIST 4345	Gender, Science, and Medicine: 1600 to the Present	
WGST/RLST 4420	Goddess Traditions	
WGST/PHIL 4500	Feminist Philosophy	
WGST/ ENGL 4510/ RLST 4730	Whores and Saints: Medieval Women	
WGST 4511/ FREN 4510	French Women Writers	
WGST 4540/ SPAN 4340	Race, Class, and Gender in Spanish Golden Age Literature	

WGST/RLST 4710	Women and Religion
WGST/PHIL 4933	Philosophy of Eros
SOCIAL SCIENCES	
ANTH 4200	Gender in Cross-Cultural Perspective
ANTH 4260	Human Reproductive Ecology
COMM 3271	Communication and Diversity
COMM 3275	Family Communication
COMM 4265	Gender and Communication
COMM 4268	Communication and Diversity in U.S. History
CRJU 4190	Gender and Crime
ECON 3100	Economics of Race and Gender
ECON 3400	Economics of Sex and Drugs
HDFR 4010	Family and Cultural Diversity
PBHL 3010	Human Sexuality and Public Health
PBHL 4200	The Global HIV/AIDS Epidemic
PSCI 3034	Race, Gender, Law and Public Policy
PSCI 3035	Political Movements: Race and Gender
PSYC 3235	Human Sexuality
PSYC 3405	Family Psychology
PSYC 3611	Psychology of Women
PSYC 3612	Domestic Abuse
SOCY 4110	Sociology of Health Care
WGST/SOCY 3010	Sociology of Human Sexuality
WGST/SOCY 3080	Sex and Gender
WGST/SOCY 3700	Families and Society
WGST/PSCI 4150	Gender Politics in the Middle East: Beyond Orientalism & Islamism
WGST/PSCI 4215	Women's Rights, Human Rights: Global Perspectives
WGST/PSCI 4248	Gender, Development and Globalization
WGST/SOCY 4270	Social Meanings of Reproduction
WGST/ETST 4305	Women of Color Feminisms
WGST/PSCI 4555	International Women's Resistance
WGST/PSCI 4564	Gender and Politics
WGST/COMM 4610	Communication, Media, and Sex
WGST/COMM 4660	Queer Media Studies
WGST/SOCY 4780	Violence in Relationships
WGST/PSCI 4827	Women and the Law
Complete one of the following Women's and Gender Studies Capstone courses:	*3*
WGST 3939	Internship
WGST/ENGL/ HIST 4306	Survey of Feminist Thought
WGST/PHIL 4308	Contemporary Feminist Thought
Total Hours	**18**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/wgst/programs/undergraduate-minor-wgst/).

Dual Degrees

- Economics BA/Mathematics, BS - Dual Degree (p. 861)

Economics BA/Mathematics, BS - Dual Degree

Introduction

Please click here (p. 441) to see Economics department information or here (p. 657) for Mathematical and Statistical Sciences department information.

A solid training in the mathematical and statistical sciences is fundamental to optimally prepare economics students for graduate school. A dual degree in economics and mathematics will substantially increase program quality and career prospects for our students, as well as enhance the reputation of the economics program at CU Denver. Similarly, a solid training in quantitative and qualitative economic principles offers significant benefits to mathematics majors who seek industrial and/or consulting positions.

These degree requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Economics major advisor, Math major advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Economics Advisors:

- Debbie Evercloud debbie.evercloud@ucdenver.edu
- Jim Smith jim.smith@ucdenver.edu

Mathematics Advisor:

- Adam Spiegler math.advising@ucdenver.edu

Program Delivery

- This is an on-campus program.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- College of Liberal Arts & Sciences Graduation Requirements (p. 376)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of *72* hours with a minimum of 30 ECON credit hours and a minimum of 39 MATH credit hours.
2. Students must complete a minimum of 27 upper division (3000-level and above) ECON credit hours and a minimum of 27 upper division (3000-level and above) MATH credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the majors and must achieve a minimum cumulative GPA of 2.0 in ECON courses and a cumulative GPA of 2.25 in MATH courses. All graded attempts in required and elective courses are calculated in the major GPA. Courses taken using P+/P/F or S/U grading cannot apply to major requirements.
4. Students must complete a minimum of 18 ECON credit hours including ECON 4811 Introduction to Econometrics, with CU Denver faculty. Once a student has enrolled at CU Denver, no more courses in the major can be taken outside the CU Denver Economics Department. This includes courses offered at Metropolitan State University. The department reserves the right to require a demonstration of competence for any core courses not taken from CU Denver faculty. Additionally, the Department of Mathematical and Statistical Sciences requires that at least 15 upper-division Mathematics credits must be taken at CU Denver.

Program Restrictions, Allowances and Recommendations

1. In addition to the CLAS residence requirements, the Economics Department requires that all courses other than ECON 2012 Principles of Economics: Macroeconomics and ECON 2022 Principles of Economics: Microeconomics require written department approval to be transferred in as satisfying major requirements.
2. A student who attempts the dual degree but who does not fulfill all requirements for the Mathematics BS will need to complete the requirements for the Economics BA as a stand-alone degree. A Mathematics elective will substitute for one of the six economics electives only if all requirements of the Mathematics major are met.

Code	Title	Hours
Complete one of the following programming requirements:		*3*
MATH 1376	Programming for Data Science	
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	
Complete all of the following Economics courses:		*15*
ECON 2012	Principles of Economics: Macroeconomics	
ECON 2022	Principles of Economics: Microeconomics	
ECON 4071	Intermediate Microeconomic Theory	
ECON 4081	Intermediate Macroeconomic Theory	
ECON 4811	Introduction to Econometrics	
Complete all of the following Mathematics courses:		*30*
MATH 1401	Calculus I	
MATH 2411	Calculus II	
MATH 2421	Calculus III	
MATH 3000	Introduction to Abstract Mathematics	
MATH 3191	Applied Linear Algebra	
MATH 3200	Elementary Differential Equations	
MATH 3382	Statistical Theory	
MATH 4310	Introduction to Real Analysis I	
MATH 4779	Math Clinic	
Complete a minimum of 15 elective credit hours in ECON *(p. 862)*		*15*
Complete a minimum of 9 elective credit hours in MATH *(p. 862)*		*9*
Total Hours		**72**

Economics Electives

Code	Title	Hours
Complete six upper division level Economics elective courses or five Economics elective courses plus one Mathematics elective course from the list below.		*15*
A minimum of four of these courses must be at the 4000-level.		
ECON 3801 Introduction to Mathematical Economics and ECON 3811 Statistics with Computer Applications cannot be counted as electives.		
One of the following approved Mathematics electives can be double counted as the sixth Economics elective.		
ECON 3050	Decision Making	
ECON 3100	Economics of Race and Gender	
ECON 3300	Economics of Crime and Punishment	
ECON 3366	Managerial Economics	
ECON 3400	Economics of Sex and Drugs	
ECON 3415	Issues in International Trade and Finance	
ECON 3770	Issues in Economic Development	
ECON 4001	Topics in Economics	
ECON 4030	Data Analysis with SAS	
ECON 4050	Special Economic Problems	
ECON 4090	History of Economic Thought	
ECON 4110	Money and Banking	
ECON 4150	Economic Forecasting	
ECON 4210	Public Finance	
ECON 4240	Economic Policy Analysis	
ECON 4310	Managerial Economics	
ECON 4318	Urban Economics	
ECON 4320	Financial Economics	
ECON 4410	International Trade	
ECON 4420	International Finance	
ECON 4430	Economic Growth	
ECON 4461	Economic Incentives	
ECON 4530	Economics of Natural Resources	
ECON 4540	Environmental Economics	
ECON 4550	Game Theory and Economic Applications	
ECON 4610	Labor Economics	
ECON 4640	Sports Economics	
ECON 4660	Health Economics.	
ECON 4670	Economics of Population and Growth	
ECON 4740	Industrial Organization	
ECON 4770	Development Economics	
ECON 4812	Advanced Econometric Methods	
MATH 3301	Introduction to Optimization	
MATH 3302	Simulation in Operations Research	
MATH 3810	Introduction to Probability	
MATH 4390	Game Theory	
MATH 4387	Applied Regression Analysis	
MATH 4650	Numerical Analysis I	
MATH 4733	Partial Differential Equations	

Mathematics Electives

Code	Title	Hours
Complete four upper-division level Mathematics elective courses or three Mathematics elective course plus one Economics elective course from the list of approved Economics electives below.		*9*
Excluding MATH 3041 Fundamental Math: Algebra, Probability and Data Analysis, MATH 3195 Linear Algebra and Differential Equations, MATH 3511 Mathematics of Chemistry, MATH 3800 Probability and Statistics for Engineers, and MATH 4830 Applied Statistics.		
One of the following approved Economics electives at the end of the list can be double counted as the fourth Mathematics elective.		
MATH 3301	Introduction to Optimization	
MATH 3302	Simulation in Operations Research	
MATH 3376	Data Wrangling & Visualization	
MATH 3440	Introduction to Symbolic Logic	
MATH 3810	Introduction to Probability	
MATH 4010	History of Mathematics	
MATH 4027	Topics in Mathematics	
MATH 4110	Theory of Numbers	
MATH 4140	Introduction to Modern Algebra	
MATH 4320	Introduction to Real Analysis II	
MATH 4337	Intro to Statistical and Machine Learning	
MATH 4387	Applied Regression Analysis	
MATH 4388	Machine Learning Methods	
MATH 4390	Game Theory	
MATH 4394	Experimental Designs	
MATH 4408	Applied Graph Theory	
MATH 4409	Applied Combinatorics	
MATH 4450	Complex Variables	
MATH 4650	Numerical Analysis I	
MATH 4660	Numerical Analysis II	
MATH 4733	Partial Differential Equations	
MATH 4791	Continuous Modeling	
MATH 4792	Probabilistic Modeling	
MATH 4793	Discrete Math Modeling	
MATH 4794	Optimization Modeling	
ECON 4030	Data Analysis with SAS	
ECON 4110	Money and Banking	
ECON 4150	Economic Forecasting	
ECON 4320	Financial Economics	
ECON 4430	Economic Growth	
ECON 4550	Game Theory and Economic Applications	
ECON 4610	Labor Economics	
ECON 4740	Industrial Organization	
ECON 4812	Advanced Econometric Methods	

To learn more about the Economics BA Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/economics/programs/bachelor-arts/).

To learn more about the Mathematics BS Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/mathematical-and-statistical-sciences/undergraduate-goals-and-objectives/).

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/clas/).

CLAS Interdisciplinary Certificates

- Allied and Professional Health Sciences Post Baccalaureate Certificate (p. 865)
- Civics, Public Policy and Equity Undergraduate Certificate (p. 871)
- Digital Studies Undergraduate Certificate (p. 873)
- Professional Skills Undergraduate Certificate (p. 875)

Allied and Professional Health Sciences Post Baccalaureate Certificate

Introduction

Please click here (p. 609) to see Integrative Biology Department information.

The health field offers job opportunities and rewarding careers. It is one of the fastest growing industries in the US and the Bureau of Labor Statistics has projected increasing demand and labor shortages for at least the next ten years. The CU Denver Post-Baccalaureate Allied and Professional Health Sciences Certificate was developed as an opportunity for the many students who already have a bachelor's degree and want to shift their career into this large and fast growing industry to improve employment opportunities and potential earnings.

In order to improve their position among many highly qualified applicants to health professions programs and for health science related jobs, we anticipate that many students will need to continue their higher education. The College of Liberal Arts and Sciences has developed a certificate that provides a broad foundation in STEM (Biology, Chemistry and Physics) and advanced health-oriented coursework that is essential for both graduate and professional programs and the needs of the health industry.

Students who have already completed an undergraduate degree from an accredited College/University, but need additional undergraduate pre-requisite courses to apply to health professions programs (including medicine, pharmacy, dentistry, nursing, lab technicians, health research jobs and more), can benefit from the CU Denver Post Baccalaureate Allied and Professional Health Sciences Certificate. CU Denver is well-known for preparing students for applications to health careers and acceptance to health professions programs. This certificate program offers high quality, rigorous preparatory classes and exceptional health careers advising including assistance with letters of evaluation, seminars on application processes, and assistance finding clinical, research, and community service experiences to enhance applications.

These degree requirements are subject to periodic revision by the academic department, and the College reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their program advisor to confirm the best plans of study before finalizing them. Exceptions and substitutions must be approved by the Director of the certificate.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

When applying to CU Denver, students should select the Undergraduate Degree-Seeking option. After indicating that the student has or will have completed a bachelor's degree, the applicant should be directed to a screen that allows selection into the Allied and Professional Health Sciences Certificate. After admission, students should meet with the Program Director of the Certificate (NC 3002) to work collaboratively to develop a course plan that best meets their academic and career goals.

Contact Details

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Health Professions Advising, NC 3002 C

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 32 credit hours, with a minimum of 15 credit hours at CU Denver from the time students start the program, from approved CU Denver courses.
2. Students must complete a minimum of 12 upper-division (3000-level and above) credit hours from approved CU Denver courses.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 2.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. The 15 credit hours of approved courses must be completed at CU Denver, from the time a student starts the program. 12 of these credit hours must be upper division (3000-4000 level courses). Other coursework (up to 17 credit hours) used as prerequisites or other courses applicable to the certificate program, may be taken at CU Denver or transferred from another university with evaluation and approval.

Program Restrictions, Allowances and Recommendations

1. Students may use prior/ transfer coursework to fulfill requirements and prerequisites, as long as departmental faculty evaluate the coursework and decide courses are directly equivalent to the courses at CU Denver.
2. The certificate must be completed within a five-year period.
3. Individual courses used to earn the certificate may carry other prerequisites that must be met before enrolling.
4. All of the courses or equivalent credit through transfer coursework must be taken within the last 10 years.
5. A prerequisite for any course must be transferred or completed at CU Denver before enrolling in that course.
6. Graduate level courses can substitute for their undergraduate counterparts with approval by Program Director.
7. Specific requirements may exist pertaining to financial aid.
8. Students must already have earned a Bachelor's degree to be admitted to this certificate.
9. Students currently enrolled in Bachelor's, Master's or Doctoral degree programs are not eligible for this certificate.
10. Students who complete this certificate may not apply the courses used to earn the certificate toward a second degree, if they choose to return and seek a second degree at CU Denver.

Code	Title	Hours
Complete a minimum of 32 credit hours from the following courses: [1]		*32*
ANTH 3000	Globalization, Migration and Transnationalism	
ANTH 3150	Special Topics in Medical Anthropology	
ANTH 3202	Anthropology of Health Care Policy	
ANTH 3666	Anthropology of Death	
ANTH 4010/5014	Medical Anthropology: Global Health	
ANTH 4080/5080	Global Health Practice	
ANTH 4270	Anthropology of the Body	
ANTH 4290/5290	Anthropology and Public Health	
ANTH 4300/5300	Migrant Health	
ANTH 4600/5600	Medical Anthropology	
ANTH 4800/5800	Special Topics in Medical Anthropology	
BIOE 3010	Bioinstrumentation	
BIOE 3020	Introduction to Biomechanical Analysis	
BIOE 3030	Introduction to Biomaterials	
BIOE 3040	Physiology for Bioengineering	
BIOE 3050	Cell & Molecular Bioengineering	
BIOE 3051	Cell & Molecular Bioengineering Lab	
BIOE 3060	Biostatistics, Measurement and Analysis	
BIOE 3070	Bioengineering Lab I	
BIOE 3071	Bioengineering Lab II	
BIOE 3090	Introduction to BioDesign	
BIOE 3939	Undergraduate Internship	
BIOE 4035	Undergraduate BioDesign II	
BIOE 4045	BioDesign III	
BIOE 4057	Rehabilitation and Assistive Technology	
BIOE 4053	Optics and Microscopy in Biomedical Research	
BIOE 4058	Intro to Design, Disability, and Aging	
BIOE 4063	3D Modeling for Bioengineers	
BIOE 4064	Advanced MatLab For Bioengineers And Life Scientists	
BIOE 4068	Introduction to Medical Imaging	
BIOE 4069	Advanced Biomechanics for Undergraduates	
BIOE 4073	Neural Interfaces and Bionic Limbs	

BIOE 4083	Polymers in Biomedical Applications
BIOE 4085	Tissue Engineering
BIOE 4420	Special Topics in Bioengineering
BIOE 4840	Independent Study in Bioengineering
BIOE 4929	Undergraduate Research Project
BIOL 2010	Organisms to Ecosystems (Gen Bio)
or BIOL 2030	Honors Organisms to Ecosystems (Gen Bio)
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)
or BIOL 2031	Honors Organisms to Ecosystems Lab (Gen Bio)
BIOL 2020	Molecules to Cells (Gen Bio)
or BIOL 2040	Honors Molecules to Cells (Gen Bio)
BIOL 2021	Molecules to Cells Lab (Gen Bio)
or BIOL 2041	Honors Molecules to Cells Lab (Gen Bio)
BIOL 3074	Human Reproductive Biology
BIOL 3104	Behavioral Genetics
BIOL 3124	Introduction to Molecular Biology
BIOL 3134	Advanced Topics
BIOL 3225	Human Physiology
BIOL 3244	Human Anatomy
BIOL 3411	Principles of Ecology
BIOL 3445	Introduction to Evolution
BIOL 3521	Vertebrate Biology
BIOL 3525	Parasitology
BIOL 3611	General Cell Biology
BIOL 3612	Cell Biology Laboratory
BIOL 3621	Introduction to Immunology
BIOL 3650 & BIOL 3651	General Microbiology and General Microbiology Lab
BIOL 4674	Endocrinology
BIOL 3763	Biostatistics
BIOL 3804	Developmental Biology
BIOL 3832	General Genetics
BIOL 3939	Internship
BIOL 4024/5024	Introduction to Biotechnology
BIOL 4050	Advanced Biology Topics
BIOL 4053	Disease Ecology
BIOL 4055	Virology
BIOL 4064	Cell Biology of Disease
BIOL 4125	Molecular Biology Laboratory
BIOL 4126	Molecular Genetics
BIOL 4128	Topics in Molecular Biology
BIOL 4134	Human Genetics
BIOL 4144	Medical Microbiology
BIOL 4165	Neurobiology
BIOL 4225	Genomics and Bioinformatics
BIOL 4415	Applied Microbial Ecology
BIOL 4425	Biogeography
BIOL 4460	Environmental Toxicology
BIOL 4464	Exercise Physiology
BIOL 4475	Mechanisms of Human Pathology
BIOL 4494	Population and Evolutionary Genetics
BIOL 4550	Cell Signaling

BIOL 4622	Topics in Immunology
BIOL 4634	Biology of Cancer
BIOL 4644	Advanced Human Anatomy Laboratory
BIOL 4815	Structural Biology of Neurodegenerative Diseases
BIOL 4825	Biochemistry of Metabolic Disease
BIOL 4835	Biochemistry of Gene Regulation and Cancer
BIOL 4840	Independent Study
BIOL 4880	Directed Research
BIOL 4990	Undergraduate Research Seminar
CHEM 1000	Foundations for General Chemistry
CHEM 1474	Core Chemistry: Chemistry for Everyday
CHEM 2031	General Chemistry I
or CHEM 2081	Honors General Chemistry I
CHEM 2038	General Chemistry Laboratory I
or CHEM 2039	Majors General Chemistry I Laboratory
or CHEM 2088	Honors General Chemistry I Laboratory
CHEM 2061	General Chemistry II
or CHEM 2091	Honors General Chemistry II Lecture
CHEM 2068	General Chemistry Laboratory II
or CHEM 2069	Majors General Chemistry II Laboratory
or CHEM 2098	Honors General Chemistry II Laboratory
CHEM 2300	Nutritional Chemistry
CHEM 3011	Inorganic Chemistry
CHEM 3018	Inorganic Chemistry Laboratory
CHEM 3111	Analytical Chemistry
CHEM 3118	Analytical Chemistry Laboratory
CHEM 3411	Organic Chemistry I
or CHEM 3481	Majors Organic Chemistry I
CHEM 3418	Organic Chemistry Lab I
or CHEM 3488	Majors Organic Chemistry Laboratory I
CHEM 3421	Organic Chemistry II
or CHEM 3491	Majors Organic Chemistry II
CHEM 3428	Organic Chemistry Lab II
or CHEM 3498	Majors Organic Chemistry Laboratory II
CHEM 3810	Biochemistry
CHEM 4810	General Biochemistry I
CHEM 4815	Structural Biology of Neurodegenerative Diseases
CHEM 4820	General Biochemistry II
CHEM 4825	Biochemistry of Metabolic Disease
CHEM 4828	Biochemistry Lab
CHEM 4835	Biochemistry of Gene Regulation and Cancer
CHEM 4845	Molecular Modeling and Drug Design
CHEM 4860	Bioinorganic Chemistry: Bioinorganic compounds in medicine
COMM 2500	Introduction to Health Communication
COMM 4230	Nonverbal Communication
COMM 4260	Communication and Conflict
COMM 4500	Health Communication
COMM 4525	Health Communication and Community
COMM 4550	Rhetorics of Medicine & Health
COMM 4558	Digital Health Narratives
COMM 4575	Designing Health Messages
COMM 4620	Health Risk Communication

COMM 4621	Visual Communication
GEOG 3401	Geography of Food and Agriculture
GEOG 3501	Geography of Health
GEOG 4080	Introduction to GIS
GEOG 4085	GIS Applications for the Urban Environment
GEOG 4235	GIS Applications in the Health Sciences
GEOG 4710	Disasters, Climate Change, and Health
HEHM 3100	Introduction to Health Humanities
HEHM 3570	Death & Dying: Social & Medical Perspectives
HIST 3297	Social History of Asian Americans
HIST 3343	Women & Gender in US History
HIST 3345	Immigration and Ethnicity in American History
HIST 3347	African-American History, 1619-Present
HIST 3365	Aztlan in the United States: Chicano History from 1821
HIST 3396	History of the American Indian
HIST 4076	History of Modern Science
HIST 4345	Gender, Science, and Medicine: 1600 to the Present
HIST 4348	Mind and Malady: A History of Mental Illness
HIST 4503	Topics in History of Science
IWKS 4500	Bio-Design and Innovation
IWKS 4520	Design for Healthful Human Longevity
LATN 3000	Medical Terminology
MATH 1110	College Algebra
or MATH 1108 & MATH 1109	Stretch College Algebra-Part 1 and Stretch College Algebra-Part 2
MATH 1120	College Trigonometry
MATH 1130	Precalculus Mathematics
MATH 1401	Calculus I
MATH 2411	Calculus II
MATH 2421	Calculus III
MATH 2830	Introductory Statistics
PBHL 1001	Race, Gender, Class, & Health
PBHL 2001	Introduction to Public Health
PBHL 3001	Introduction to Epidemiology
PBHL 3002	Ethnicity, Health and Social Justice
PBHL 3010	Human Sexuality and Public Health
PBHL 3020	Introduction to Environmental Health
PBHL 3021	Fundamentals of Health Promotion
PBHL 3030	Health Policy
PBHL 3031	Health, Human Biology and Behavior
PBHL 3041	Health, Culture and Society
PBHL 3051	Mental Illness and Society
PBHL 3070	Perspectives in Global Health
PBHL 3071	Global Topics In Sexual and Reproductive Health
PBHL 3081	Health in the City: Urban Health
PBHL 3440	Medical Sociology
PBHL 4021	Community Health Assessment
PBHL 4031	Ethnographic Research In Public Health
PBHL 4040	Social Determinants of Health
PBHL 4070	Health Disparities
PBHL 4080	Global Health Practice
PBHL 4200	The Global HIV/AIDS Epidemic

PBHL 4620	Health Risk Communication
PHIL 2441	Logic, Language and Scientific Reasoning
PHIL 3002	Ancient Greek Philosophy
PHIL 3022	Knowledge, Perception, and the Search for Objectivity: Modern Philosophy
PHIL 3150	History of Ethics
PHIL 4242	Medicine, Health Care, and Justice: Bioethics
PHYS 3151	Biophysics Outlook I
PHYS 3161	Biophysics Outlook II
PHYS 3251	Biophysics of the Body
or PHYS 3252	Biophysics of the Body NM
PHYS 3451	Biophysics of the Cell
or PHYS 3452	Biophysics of the Cell NM
PSYC 1000	Introduction to Psychology I
PSYC 1005	Introduction to Psychology II
PSYC 2205	Lifespan Developmental Psychology for Health Majors
PSYC 2220	Biological Basis of Behavior
PSYC 3144	Human Cognition
PSYC 3205	Human Development I: Child Psychology
PSYC 3215	Human Development II: Adolescence and Adulthood
PSYC 3222	Principles of Learning and Behavior
PSYC 3262	Health Psychology
PSYC 3264	Exercise, Brain and Behavior
PSYC 3265	Drugs, Brain and Behavior
PSYC 3305	Abnormal Psychology
PSYC 3724	Developmental Neuroscience
PSYC 3810	Neuropsychology
PSYC 4054	Behavioral Neuroscience
SOCY 1001	Understanding the Social World
SOCY 3440	Medical Sociology
SOCY 3115	Quantitative Methods & Analysis
SOCY 3119	Qualitative Methods
SOCY 3570	Death & Dying: Social & Medical Perspectives
SOCY 4050	Health Disparities
SOCY 4110	Sociology of Health Care
SOCY 4270	Social Meanings of Reproduction
SOCY 4650	Sociology of Adulthood and Aging
SPAN 1070	Spanish Medical Conversation for Beginners
SPAN 2070	Spanish Medical Conversation for Beginners II
SPAN 3740	Spanish for the Healthcare Professions I
SPAN 3750	Spanish for the Healthcare Professions II
Total Hours	**32**

[1] Students should choose courses in close consultation with the program director.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/health-professions-programs/allied-health-sciences-certificate/).

Civics, Public Policy and Equity Undergraduate Certificate

Introduction

This certificate is designed to help students from any disciplinary major develop competencies and skills regarding United States civics from diverse perspectives. The certificate provides students with many course options to complete introductory and advanced coursework tailored to their individual interests. Student demand for such a certificate will likely come from students who major in the social sciences, but also from students who have an interest in completing coursework in American civics, public policy, and equity from other disciplines. This certificate promotes civic engagement and participation in the political process.

Students will engage in the following focus areas:

Historical and Legal Context

Courses completed in this area facilitate the development of knowledge and skills related to the American founding, the United States Constitution, American political development, political actors and institutions, constitutional law and the legal system, and the rights and duties of citizenship, among others. Learning objectives for these courses vary depending on the department offering the course selections and the specific courses selected, but students should generally develop broad knowledge of historical and contemporary aspects of American political institutions and civic engagement. While many of these courses employ historical and/or legal approaches to the study of civics, additional or alternative approaches may also be utilized, such as analytical lenses that are theoretical or applied in nature. Courses typically emphasize critical thinking and written communication skills and may also involve independent or collaborative original research projects or experiential learning beyond the classroom.

Public Policy

Courses completed in this area facilitate the development of knowledge and skills pertaining to the formulation, analysis, and critique of public policy. Courses included in this category examine public policy from diverse perspectives using numerous methodological approaches. Individual courses may engage in the study of the primary actors, entrepreneurs, and institutions that formulate public policy, examine policy from a public administration perspective, and/or provide a focused analysis of policy within the context of a specific issue area, among others. Learning objectives for these courses vary depending on the department offering the course selections, but students should generally expect to engage in an immersive study of public policy as outlined in each course description.

Equity

Courses completed in this area facilitate the development of knowledge and skills regarding equity in politics and society. Topics of study may include social movements, social justice, political reforms related to protected classes, criminal justice reform, societal inequalities, public goods, and responsible citizenship, among others. Courses may have a historical, contemporary, and/or futuristic focus and may approach the study of equity from theoretical, analytical, practical, critical, or aspirational perspectives, among others. Learning objectives for these courses vary depending on the department offering the course selections, but students should generally develop competencies in their particular area of study with each course addressing political or social equity in some meaningful capacity.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- All prospective students must contact Marjorie Levine-Clark, Associate Dean for Diversity, Outreach, and Initiatives to declare their interest and intent to complete the program.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Civics, Public Policy and Equity advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credit hours, from approved coursework
2. Students must complete a minimum of six upper division (3000-level and above) credit hours, from approved coursework.
3. Students must earn a minimum grade of C (2.0) in all courses that apply to the certificate and must achieve a minimum cumulative GPA of 2.0. All graded attempts in required and elective courses are calculated in the GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must complete the specified number of courses from the designated certificate focus areas. Exceptions to the focus area distribution requirements are not permitted.
2. Courses completed in pursuance of the certificate may also count toward CU Denver major or minor requirements, however each course may count for a maximum of two graduation requirements.

Code	Title	Hours
Complete two of the following Historical and Legal Context courses:		*6*
HIST 1361	U.S. History to 1876	
HIST 1362	U.S. History Since 1876	
HIST 1400	Controversies in History	
HIST 3230	The American Presidency	
HIST 4494	Red and Blue America: U.S. History, 1973-Present	
HUMN/SSCI 4251	Introduction to Legal Studies	
HUMN/SSCI 4325	First Amendment: Theory and Context	
PHIL 4260	Why Obey the Law? Introduction to Philosophy of Law	
PSCI 1101	American Political System	

PSCI 4024	State Politics: Focus Colorado	
PSCI 4044	The Presidency	
PSCI 4477	Constitutional Law I	
PSCI 4487	Constitutional Law II	
PSCI 4494	Judicial Politics	
PSCI 4837	Contemporary Issues in Civil Liberties	
SOCY 4740	Courts & Society	
Complete one of the following Policy courses:		*3*
COMM 4680	Mass Media Law And Policy	
CRJU 4121	Ethics in Criminal Justice	
CRJU 4430	Law and Society	
CRJU 4440	Courts and Social Policy	
GEOG 4420	The Politics of Nature	
GEOG 4440	Science, Policy and the Environment	
PHIL 3200	Justice, Freedom, and Power: Social and Political Philosophy	
PHIL 3430	How to think green: Environmental Ethics	
PHIL 4242	Medicine, Health Care, and Justice: Bioethics	
PSCI 3034	Race, Gender, Law and Public Policy [1]	
PSCI 4009	Politics of the Budgetary Process	
PSCI 4034	Political Parties and Pressure Groups	
PSCI 4354	Environmental Politics	
PSCI 4545	Immigration Politics	
PUAD 3002	Organizational and Strategic Management	
PUAD 3005	Collaboration Across Sectors	
PUAD 4000	Human Resources and Ethics in Public Service	
PUAD 4740	Sustainable Energy Policy	
SOCY 4700	Sociology of Law	
Complete one of the following Equity courses:		*3*
COMM 2020	Communication, Citizenship, and Social Justice	
COMM 4040	Communication, Prisons, and Social Justice	
CRJU 4120	Race, Class, and Justice	
CRJU 4130	Poverty, Crime, and Justice	
ECON 3100	Economics of Race and Gender	
EDFN 1000	Equality, Rights & Education	
ETST/PBHL 3002	Ethnicity, Health and Social Justice	
HDFR 4260	Family Systems and Social Justice	
HDFR 4500	Diversity, Inclusion, Social Justice in Higher Education	
HIST 3349	Social Movements in 20th Century America	
HIST 4308	Crime, Policing, and Justice in American History	
PHIL 3500	Ideology and Culture: Racism and Sexism	
PHIL/WGST 4500	Feminist Philosophy	
PMUS 3100	US Music: Social & Political Impact	
PSCI 1001	Introduction to Political Science: The Quest for Freedom and Justice	
PSCI 3034	Race, Gender, Law and Public Policy [1]	
PSCI 3035	Political Movements: Race and Gender	
PSCI 3064	Power and Empowerment in the United States	
PSCI 3914	The Urban Citizen	
PSCI 4207	Theories of Social and Political Change	
PSCI 4427	Law, Politics and Justice	
PSCI/WGST 4564	Gender and Politics	
PUAD 4002	Leading and Engaging for the Public Good	
PUAD 4145	Philanthropy	
SJUS 2000	Foundations in Social Justice	
SJUS 4050	Special Topics: Social Justice	
SOCY 2001	Inequalities in Social World	
SOCY 3020	Race and Ethnicity in the U.S.	
SOCY/ETST 4020	Race, Culture and Immigration	
SOCY 4050	Health Disparities	
SOCY 4440	Poverty and Social Inequality	
Total Hours		**12**

[1] PSCI 3034 Race, Gender, Law and Public Policy can apply toward the Policy or Equity requirement.

Upon completion of this program, students will:

• develop critical thinking and written communication skills

• explain and analyze historical and contemporary aspects of American political institutions and civic engagement

• describe and examine the formulation, analysis, and critique of public policy

• discuss and evaluate how equity/inequity operates in politics and society

Digital Studies Undergraduate Certificate

Introduction

From social media and mobile phones to the algorithms in self-driving cars, digital and information technologies are everywhere. The Digital Studies Certificate provides students with the opportunity to investigate the relationships between new communication technologies and society and to develop skills creating digital media messages and products.

Social sciences and humanities majors can use this certificate to develop and demonstrate their technical skills, while science and engineering students can use it to build expertise in understanding the social and cultural aspects of new technologies. Students from any CU Denver school or college who earn the Digital Studies Certificate will be able to demonstrate to a wide range of potential employers or graduate schools that they have both technical skills and the ability to critically analyze new media. Students who successfully complete the Digital Studies Certificate will be able to:

- Describe and analyze the relationships between digital media and their cultural, social, political, and ethical contexts
- Use digital media to communicate messages to a variety of audiences
- Use digital media to solve problems in a range of disciplines and situations
- Use digital media and related analytical skills as career-building tools

Program Delivery

- This is a hybrid program, with courses on-campus and online.

Declaring This Certificate

- Eligibility: CU Denver students in any discipline can enroll in the program at any point in their undergraduate studies.
- CLAS's Interdisciplinary Studies program sponsors the certificate, and the CLAS Director of Digital Initiatives will provide advising and administrative management.
- Application Procedures: Students are encouraged to apply for the Digital Studies Certificate at any point in their undergraduate studies. To apply, students should print and complete a Digital Studies Certificate Application and submit it to the CLAS Director of Digital Initiatives.
- For questions about the Digital Studies Undergraduate Certificate contact Dr. John Tinnell (John.Tinnell@UCDenver.edu (john.tinnell@ucdenver.edu)).

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Digital Studies advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 12 credits of required courses chosen from the approved courses in each cluster: one course (three credits) from each of the three clusters (for a total of nine credits), plus the remaining three credits from any one of the three clusters.
2. Students must complete a minimum of six upper division (3000-level and above) credits, taken from the approved courses below.
3. Students must earn a minimum grade of B (3.0) in all courses that apply to the certificate and must achieve a minimum cumulative certificate GPA of 3.0. All graded attempts in required and elective courses are calculated in the certificate GPA. Courses taken using P +/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credits applied to the certificate with CU Denver faculty.

Program Restriction, Allowances and Recommendations

1. The certificate will be awarded when a student graduates with the bachelor's degree.
2. Co-curricular requirement: Students must attend at least three Career Center sessions, which can include events, workshops, or one-on-one appointments.

Digital Studies Certificate Course Clusters

- **Theory and Analysis:** Courses in this cluster focus on theorizing, explaining, and describing the relationships between digital, media, and communication technologies and society. They enable students to critically assess and analyze digital media and information, such as understanding the biases in seemingly neutral Google search results or examining how people use Twitter to build social movements
- **Digital Media Production:** Courses in this cluster focus on developing hands-on skills in the use of digital, media, and communication technologies. They provide opportunities for students to develop their skills with a variety of digital tools, such as digital photography, mapping, and social media management.
- **Integration:** Courses in this cluster bring together both understanding and using digital, media, and communication technologies.

Other courses may apply to each cluster with the approval of the Director of Digital Initiatives certificate advisor.

Code	Title	Hours
Complete one course (three credits) from each of the three clusters (for a total of nine credits), plus three elective credits from any one of the three clusters.		
Courses must come from at least two different subject codes.		

Complete one of the following Theory and Analysis cluster courses:		*3*
	ANTH 2400	Exploring Culture through Social Media
	BUSN 6610/ ISMG 6180	Information Systems Strategy
	COMM 2030	Digital Democracy
	COMM 3650	Media and Society
	COMM/WGST 4610	Communication, Media, and Sex
	COMM 4660/5660	Queer Media Studies
	COMM 4760	New Media and Society
	ENGL 2060	Introduction to Writing & Digital Studies
	ENTP 6022	Digital Disruption
	GEOG 2080	Introduction to Mapping and Map Analysis
	INTE 4320/5320	Games and Learning
	ISMG 2050	Business Problem Solving Tools
	ISMG 3000	Technology In Business
	MUSC 3700	Music and Entertainment Business in the Digital Age
	PHIL 4920/5920/ HUMN/SSCI 5920	Philosophy of Media and Technology
	SOCY 1011	From Killer Apps to Killer Bots: Technology and Social Change
Complete one of the following Digital Media Production cluster courses:		*3*
	COMM 2071	Media Writing Skills
	COMM 2081	New Media Production and Management
	ENGL 3084	Digital Writing and Storytelling
	ENGL 4190/5190	Advanced Topics in Writing, Rhetoric, & Linguistics (topic must be pre-approved by director)
	ENGL 4701	Multimedia in the Community
	FINE 1810	Digital 3D Foundations
	FINE 1820	Animation Foundations
	FINE 2155	Introduction to Digital Photography
	FINE 2405	Introduction to Digital Design
	FINE 3400	Designing for Web and Mobile Apps
	GEOG 4080/5080	Introduction to GIS
	GEOG 4081/5081	Cartography
	INTE 4340/5340	Learning with Digital Stories
	INTE 4680/5680	Producing Media for Learning
	IWKS 2300/5350	Fundamentals of Computational Innovation
	IWKS 3100/5170	3D Design, Computation and Prototyping
Complete one of the following Integration cluster courses:		*3*
	ANTH 4800/5800	Special Topics in Medical Anthropology
	COMM 2051	Introduction to Strategic Communication
	COMM 3660	Social Media for Social Change
	COMM 4558/5558	Digital Health Narratives
	ENGL 4190/5190	Advanced Topics in Writing, Rhetoric, & Linguistics (topic must be pre-approved by director)
	ENGL 5165	Literacy and Technology
	HIST 3260/5260	Introduction to Digital Studies
	HIST 4261/5261	Data: A User Manual
	INTE 4665/5665	Learning with Social Media and Networking
	INTE 4711/5711	Creative Designs for Instructional Materials
	IWKS 2100	Human-Centered Design, Innovation and Prototyping
	IWKS 3180/5180	Inworks: Choose Your Own Adventure: Experiences in Design, Innovation and Prototyping
	IWKS 3200/5200	Data Science for Innovators
	IWKS 3700/5700	Innovation and Society
	PUAD 4003	Strategic Communications for Public Engagement
Complete one additional course from any one of the three course clusters.		*3*
Total Hours		**12**

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/digital-studies-certificates/undergraduate-certificate/).

Professional Skills Undergraduate Certificate

Introduction

This certificate is designed for undergraduate students seeking to acquire and enhance diverse workplace skills that are highly valued by today's employers. Students will learn to communicate effectively, write persuasively, and develop proficiency in digital and media literacy or data literacy. Providing a strong foundation in communication skills, teamwork, critical thinking, and analytical writing, this certificate will help students cultivate success in the workplace.

On completion of this certificate, students will be able to:

- **Communicate their ideas** in a clear and organized manner.
- Use their **compositional and analytical skills** in a chosen professional writing field.
- Demonstrate proficiency in **digital and media literacy** or **data literacy**.
- Devise **problem-solving strategies** with the skills developed through the certificate.

Program Delivery

- This is an on-campus program.

Declaring This Certificate

- All prospective students must contact Marjorie Levine-Clark (marjorie.levine-clark@ucdenver.edu), Associate Dean for Diversity, Outreach, and Initiatives to declare their interest and intent to complete the program.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their Professional Skills advisor to confirm the best plans of study before finalizing them.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete a minimum of 12 credit hours, from approved coursework
2. Students must complete a minimum of six upper division (3000-level and above) credit hours, from approved coursework.
3. Students must earn a minimum grade of B- (2.7) in all courses that apply to the certificate and must achieve a minimum cumulative GPA of 2.7. All graded attempts in required and elective courses are calculated in the GPA. Courses taken using P+/P/F or S/U grading cannot apply to certificate requirements.
4. Students must complete all credit hours applying to the certificate with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Students must choose elective courses from at least two different disciplines.

Code	Title	Hours
Complete the following program requirements:		
Complete one of the following Communication courses:		*3*
COMM 2045	Workplace Communication	
COMM 2050	Professional Presentations	
COMM 4240	Organizational Communication	
COMM 4255	Negotiations and Bargaining	
COMM 4270	Intercultural Communication	
Complete one of the following Writing courses:		*3*
COMM 2071	Media Writing Skills	
ENGL 3154	Technical Writing	
ENGL 3170	Business Writing	
ENGL 3416	Magazine Writing	
ENGL 4280	Proposal and Grant Writing	
Complete two elective courses from one of the following groups: [1]		*6*
Group 1: Digital and Media Literacy		
COMM 2081	New Media Production and Management	
COMM 3660	Social Media for Social Change	
ETST 3272	Global Media	
HIST 3260	Introduction to Digital Studies	
INTE 2500	#Learning: Digital Spaces and Far Out Places	
MKTG 3100	Marketing Research	
Group 2: Data Literacy		
ECON 3811	Statistics with Computer Applications	
ECON 4030	Data Analysis with SAS (prereq ECON 3811 or Math 2830)	
IWKS 3200	Data Science for Innovators	
ISMG 2050	Business Problem Solving Tools	
MATH 2830	Introductory Statistics	
MATH 4830	Applied Statistics	
Total Hours		**12**

[1] Elective courses must be from different disciplines and may carry prerequisites that must be completed before enrolling.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/profesional-skills-certificate/).

School of Education & Human Development

Leadership

Dean

Marvin Lynn, Dean and Professor

Associate Deans

antwan jefferson, Equity, Diversity and Inclusion

Barbara Seidl, Teacher Education and Undergraduate Experiences
Scott Bauer, Advanced Education and Doctoral Programs

Assistant Deans

Patricia Ball, Finance and HR
Brad Hinson, Information and Academic Technology
Sandy Mondragon, Student Success and Enrollment Management

Other Administrative Leadership

Dorothy Garrison-Wade, Faculty Affairs

Contact

Admissions
Office of Admissions & Outreach
1380 Lawrence Street Center, Suite 701
303-315-6300 voice
Email: education@ucdenver.edu
Website: https://education.ucdenver.edu/academics/undergraduate (https://education.ucdenver.edu/academics/undergraduate/)

Mailing Address
School of Education & Human Development
P.O. Box 173364, Campus Box 106
Denver, CO 80217-3364

Overview

The School of Education & Human Development is a vibrant community of practicing educators and counselors, educational leaders and researchers who have a strong service ethic locally, nationally, and globally and a dedication to excellence.

Mission

Leadership for Educational Equity

Prepare and inspire education and mental health leaders to have a profound impact in fostering student opportunity, achievement and success in urban and diverse communities.

Vision

A leading school of education providing national expertise on educational issues and socially-just solutions for urban and diverse communities. Through innovative research and partnerships, we strive to be passionate agents of change, inspiring upcoming generations to learn from the past and shape the future.

Our Role in the Community

We are committed to developing forward-thinking educators and counselors who have a deep sense of inquiry, a concern for pressing social problems, a great desire to live their lives purposefully, a passion for giving back to the community and the cultural competence needed to serve urban and diverse populations.

Diversity and Inclusion

At the School of Education & Human Development (SEHD), we believe strongly that all students-diverse in race, ethnicity, economic resources, language, fluency, abilities, geography, first-generation status, age, gender and sexual identities-deserve the opportunity to learn.

Accreditation

The University of Colorado Denver is institutionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The commission can be contacted at: 230 South LaSalle Street, Suite 7-500 Chicago, IL 60604 Telephone: 1-800-621-7440

In addition, teacher education programs in the SEHD have been accredited by the Colorado State Board of Education.

School of Education & Human Development Admissions Information

For admission to the School of Education & Human Development, applicants whose cumulative high school GPA and test scores fall into the middle 50 percent range are strong candidates. A minimum 2.4 cumulative high school GPA is recommended, however, students with a 2.0 cumulative GPA are considered. *Note: Submitting test scores is optional, and won't negatively impact your application.*

Note: The Professional Year, a two-semester (fall and spring) residency in the student's final year of the undergraduate degree with licensure programs, requires a separate application and acceptance is not guaranteed. For instructions and minimum requirements, please see the Education and Human Development website (https://education.ucdenver.edu/academic-services/admissions/).

All students apply online. Instructions for undergraduate students are found at http://www.ucdenver.edu/admissions/.

Information about all degrees, programs and admission requirements can be found on the school's website at https://education.ucdenver.edu/

(For Graduate Programs and information please refer to the Graduate **(**http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/#departmentstext**) catalog.)**

School of Education & Human Development Departments and Programs

Education and Human Development (p. 880)

Bachelor of Arts: Education and Human Development

- Early Childhood Education Licensure Track, BA (p. 900)
- Early Childhood Education Non-Licensure Track, BA (p. 902)
- Elementary Education with CLDE Added Endorsement, BA (p. 910)
- Special Education, BA with added Elementary Education Endorsement (p. 941)
- Middle School Mathematics License, BA (p. 925)

- Secondary Mathematics License, BA (p. 931)
- Secondary Social Studies License, BA (p. 939)
- Secondary English Language Arts License, BA (p. 929)
- Secondary Science License, BA (p. 933)
- Undergraduate Teacher Licensure (p. 916)

T-PREP at Otero College Partnership Pathways

- Early Childhood Education License, BA - Rural Partnership with Otero College (p. 896)
- Elementary Education, BA - Rural Partnership with Otero College (p. 914)
- Middle School Math License, BA - Rural Partnership with Otero College (p. 921)
- Secondary Science License, BA - Rural Partnership with Otero College (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/education-human-development/secondary-science-license-ba-rural-partnership-otero-junior-college/)
- Special Education Generalist License, BA - Rural Partnership with Otero College (p. 945)

T-PREP at Trinidad State College Partnership Pathways

- Early Childhood Education License, BA - Rural Partnership with Trinidad State College (p. 898)
- Elementary Education License, BA - Rural Partnership with Trinidad State College (p. 908)
- Middle School Math License, BA - Rural Partnership with Trinidad State College (p. 923)
- Special Education Generalist License, BA - Rural Partnership with Trinidad State College (p. 949)

T-PREP at Northeastern Junior College Partnership Pathways

- Early Childhood Education License, BA - Rural Partnership with Northeastern Junior College (p. 894)
- Elementary Education License, BA - Rural Partnership with Northeastern Junior College (p. 906)
- Middle School Math License, BA - Rural Partnership with Northeastern Junior College (p. 919)
- Secondary Science License, BA - Rural Partnership with Northeastern Junior College (p. 935)
- Special Education Generalist License, BA - Rural Partnership with Northeastern Junior College (p. 947)

T-PREP at Lamar Community College Partnership Pathways

- Early Childhood Education License, BA - Rural Partnership with Lamar Community College (p. 892)
- Elementary Education, BA - Rural Partnership with Lamar Community College (p. 912)
- Special Education Generalist License, BA - Partnership with Lamar Community College (p. 943)

CLAS Secondary Teacher Education Programs

- Secondary Education Licensure - CLAS Major Pathway (p. 927)

Bachelors to Masters Program (BAMA)

- Education and Human Development BAMA with Multiple MA Options (p. 904)

Minors

- Digital Media Design for Learning Minor (p. 952)
- Education Studies Minor (p. 953)
- Culturally and Linguistically Diverse Education Minor (p. 951)
- Teacher Education Minor (p. 954)

Human Development and Family Relations (p. 956)

Bachelor of Science

- BS/MA 4+1 Program in Learning, Developmental, and Family Sciences: HDFR Concentration (p. 959)
- Human Development and Family Relations, BS (p. 960)
- Human Development and Family Relations, BS - Rural Partnership with Trinidad State Junior College (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/human-development-family-relations/human-development-family-relations-bs-rural-partnership-trinidad-state-junior-college/)

Minor

- Human Development and Family Relations Minor (p. 964)

School of Education & Human Development Graduation Requirements

For additional information regarding Graduation policies and procedures, please visit the Graduation section of the catalog.

Minimum Grade Requirements

Students must earn a final grade of at least a C (2.0) in major courses and a B- (2.7) or above in designated major courses and Professional Year Residency courses within the major. These courses/requirements must be repeated if the student fails to earn the grade required.

Classroom-Based Field Experiences

Students must complete required classroom-based field experiences.

Other Requirements

Students must complete all program assessments and professional milestones as outlined on the degree plans. For teacher education licensure students, this includes passing the appropriate Praxis exam.

Major

Students must complete all requirements associated with their SEHD major.

Applying for Graduation

All students should meet with their advisor at the beginning of their final term for a graduation check-out appointment. We recommend students schedule an appointment PRIOR to the add/drop deadline of their final term in case schedule adjustments need to be made to fulfill final degree requirements. After meeting with their advisor, students should apply for

graduation online through the UCDAccess portal before the graduation application deadline.

Academic Honors

Academic honors are awarded at the time of graduation, based on the cumulative University of Colorado undergraduate GPA. To be eligible for honors, a SEHD student must have completed a minimum of 30 semester hours at the University of Colorado (on any CU campus). A cumulative CU GPA of 3.650-3.749 earns cum laude, a 3.750-3.849 earns magna cum laude and 3.850 or above earns summa cum laude honors designations.

Petitioning for Exceptions to Standing Academic Policy

Students are required to complete the degree requirements that were in effect when they began as a degree-seeking student at CU Denver, including CU Denver Core, major, and track requirements. If a program revises its curriculum, students have the option of following their original degree requirements or the revised curriculum. Courses under the original requirements may no longer be taught or may not be available for a set duration. In this case, the program will approve course substitutions. In cases where the Colorado Department of Education requirements for licensure or endorsements change, program plans may also change to align with these requirements.

Course substitutions in the major or minor must be approved by the Program Leader in the specific program area. Course substitutions in the SEHD major must be approved by the Program Leader.

The SEHD Student Committee reviews students' academic appeals regarding retention, disenrollment, dismissal and other academic matters such as grade appeal, academic dishonesty, or honor code issues. Instruction on how to submit an appeal can be found at http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/CurrentStudents/Resources/Pages/CurrentResources.aspx.

School of Education & Human Development Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

Undergraduates Taking Graduate Coursework

Undergraduate students are not typically permitted to take courses at the graduate level. SEHD undergraduate students interested in taking graduate-level courses should consult with the instructor and the program, as well as with their academic advisor. The exception to this policy is licensure students admitted into the BA/MA which requires students to take 9 semester credit hours at the graduate level during their final year (the professional year) and HDFR students admitted into the BS/MA.

Internships

Internships are a large part of our work in SEHD, but have varying requirements by program. Please refer to program handbooks and materials for policies regarding internships.

How to Declare or Change a Major or Minor

Undergraduate majors in the SEHD include the Bachelor of Arts in Education and Human Development (EDHD) and the Bachelor of Science in Human Development and Family Relations (HDFR). Additionally, the EDHD major has several tracks, including Elementary Education (K-6 licensure), Special Education (ages 5-21 licensure), Early Childhood Education licensure (birth-age 8 licensure), Early Childhood Education non-licensure, and several secondary pathways (math, science, English, social studies, middle school math). It is important for students to declare a major and track (if applicable) as early as possible in their academic career to ensure they take appropriate courses.

Students who wish to transfer to the SEHD from another school/college must meet with an academic advisor and formally apply for an intra-university transfer (IUT). Students must have a minimum of 2.000 cumulative University of Colorado GPA to be eligible for an IUT to the SEHD. Students should also be aware that, for teacher education licensure tracks, a minimum of a 3.000 cumulative University of Colorado GPA is required for admission to their final year, the Professional Year (students with a lower GPA may be considered under certain conditions; please see SEHD website).

Grade Appeals

Students must follow the process below.

1. Discuss concerns with the faculty member.
2. If the issue is not resolved after a conversation with the faculty member, the student may appeal to the SEHD Student Committee. The process for submitting a student appeal can be found here (https://education.ucdenver.edu/academic-services/student-resources/).

Special Grading Options

Courses taken as P+/P/F or S/U are subject to the same minimum grade standards as specified for the requirement. Students must earn a final grade of at least a C (2.0) in major courses and a B- (2.7) or above in licensure or endorsement courses within the major. Major licensure and endorsement courses requiring a B- or better are not permitted to be taken as P+/P/F or S/U grading.

In addition to the above, please consult the CU Denver policy covering the P+/P/F grading option (see the Registration and Records section of this catalog) for P+/P/F limits and application to general education courses.

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

Incomplete Grade

Students who wish to request a grade of Incomplete ("I"), should refer to the SEHD Course Completion Agreement for Incomplete Grade. The full policy and form are available on the SEHD Student Resources webpage (https://education.ucdenver.edu/academic-services/student-resources/).

Attendance Policy

Students are required to attend classes, including online classes, on a regular basis. Absences must be arranged with the instructor in advance and must conform to university and instructor policies on attendance.

Course Repeat Policy

Students may repeat any course. All courses, including repeated courses, remain on the transcript and all grades are included in the student's University of Colorado GPA calculation. Course credit toward graduation is counted only once for a typical course, no matter how many times the course is repeated. Some types of courses (e.g. Internships, Independent Studies, etc.) may be repeatable for applicable credit within a certain range of total semester hours. Special Topics courses may be repeatable for applicable credit within a certain range of total semester hours, as long as the topic is different. See course descriptions for the maximum semester hours applicable from each course.

Teacher education courses must be passed within the first two attempts of the course. Exceptions will be considered through a petition process. Students should consult with their advisors about this process.

Education and Human Development

Programs

- Early Childhood Education License, BA - Rural Partnership with Lamar Community College (p. 892)
- Early Childhood Education License, BA - Rural Partnership with Northeastern Junior College (p. 894)
- Early Childhood Education License, BA - Rural Partnership with Otero College (p. 896)
- Early Childhood Education License, BA - Rural Partnership with Trinidad State College (p. 898)
- Early Childhood Education Licensure Track, BA (p. 900)
- Early Childhood Education Non-Licensure Track, BA (p. 902)
- Education and Human Development BAMA with Multiple MA Options (p. 904)
- Elementary Education License, BA - Rural Partnership with Northeastern Junior College (p. 906)
- Elementary Education License, BA - Rural Partnership with Trinidad State College (p. 908)
- Elementary Education with CLDE Added Endorsement, BA (p. 910)
- Elementary Education, BA - Rural Partnership with Lamar Community College (p. 912)
- Elementary Education, BA - Rural Partnership with Otero College (p. 914)
- Undergraduate Teacher Licensure (p. 916)
- Middle School Math License, BA - Rural Partnership with Northeastern Junior College (p. 919)
- Middle School Math License, BA - Rural Partnership with Otero College (p. 921)
- Middle School Math License, BA - Rural Partnership with Trinidad State College (p. 923)
- Middle School Mathematics License, BA (p. 925)
- Secondary Education Licensure - CLAS Major Pathway (p. 927)
- Secondary English Language Arts License, BA (p. 929)
- Secondary Mathematics License, BA (p. 931)
- Secondary Science License, BA (p. 933)
- Secondary Science License, BA - Rural Partnership with Northeastern Junior College (p. 935)
- Secondary Science License, BA - Rural Partnership with Otero College (p. 937)
- Secondary Social Studies License, BA (p. 939)
- Special Education, BA with added Elementary Education Endorsement (p. 941)
- Special Education Generalist License, BA - Rural Partnership with Lamar Community College (p. 943)
- Special Education Generalist License, BA — Rural Partnership with Otero College (p. 945)
- Special Education Generalist License, BA - Rural Partnership with Northeastern Junior College (p. 947)
- Special Education Generalist License, BA - Rural Partnership with Trinidad State College (p. 949)
- Culturally and Linguistically Diverse Education Minor (p. 951)
- Digital Media Design for Learning Minor (p. 952)
- Education Studies Minor (p. 953)
- Teacher Education Minor (p. 954)

Culturally & Linguistically Diverse Education (CLDE)

CLDE 1000 - Language, Identity, & Power: International Perspectives (3 Credits)
This course explores the relationship between language, identity, and power in various international contexts. The course considers how legacies of inequality for particular communities are reflected in societal attitudes about languages and language users and subsequent language planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

CLDE 2000 - CLDE Foundations (3 Credits)
This CLDE foundations course includes an overview of history and legislation related to bilingual education and second language education, and provides an overview of essential linguistics for educators and bilingual language development and assessment. Max hours: 3 Credits.
Grading Basis: Letter Grade

CLDE 3830 - Culturally and Linguistically Responsive Teaching through STEM (3 Credits)
In this course, you will develop your ability to plan for the opportunities and challenges for language development during science and math learning in preK-12 education settings. In doing so, you will develop linguistically responsive teaching practices for all subjects. Prereq or coreq: EDHD 3930 and SPED 4030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 3930 and SPED 4030

CLDE 4020 - Responsive Classroom Communities (3 Credits)
This course investigates how people learn and the implications of social and cultural learning for establishing engaging and culturally responsive learning communities. Through this course teacher candidates will better understand their roles in student learning and how their own cultural lenses impact their relationships with students and families, and influence student success in the classroom. Cross-listed with CLDE 5020. Prereq: EDFN 4010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: EDFN 4010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students.

CLDE 4700 - Social Studies for Multilingual Learners (3 Credits)
Participants will use a social justice lens to investigate the content and language demands of the four disciplines of social studies: History, Civics, Geography and Economics. This class focuses on Social Studies methods as well as essential practices for teaching multilingual students. Restriction: Restricted to students in Education and Human Development with between 40 and 180 cumulative credit hours. Cross-listed with CLDE 5700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 40 and 180 cumulative credit hours.

CLDE 4835 - Special Topics: Culturally and Linguistically Diverse Education (1-3 Credits)
Advanced study of special topics that examine multilingualism, cultural pluralism, and community in Culturally and Linguistically Diverse Education. Repeatable. Max hours: 9 credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Early Childhood Education (ECED)

ECED 1202 - Child Guidance and Classroom Community (3 Credits)
This course presents evidence-based classroom strategies to promote social competence, build classroom community and reduce or prevent behavior problems. Emphasis is placed on understanding child development and observing behavior to make decisions for children ages birth through age 8. Cross-listed with ECED 4202. Typically offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ECED 2000 - Early Childhood Education as a Profession (3 Credits)
This course provides an overview of the ECE profession and it's philosophical and historical foundations. Trends in early childhood care and education and professionalism are examined. Topics include developmental domains and appropriate practices, curriculum models, guidance strategies, family and community relationships, diversity and inclusion, and leadership skills to support quality early care and education work settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 2930 - Infant & Toddler Field Experience & Seminar (3 Credits)
ECED 2930 is designed to support teacher candidates in making theory-to-practice connections, focused on understanding infant and toddler development. Students will spend one day per week in an infant-toddler classroom and engage in a weekly seminar to mediate learning. Prereq or coreq: ECED 4070. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECED 4070. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

ECED 4010 - Inquiry and the Disciplines (3 Credits)
This course introduces students to the role, value and practices of inquiry in early childhood education and explores the integration of the visual arts and creative expression with the disciplines of mathematics, literacy, science, social studies, as well as young children's approaches to learning. Restriction: Professional Year Admission required for licensure students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required for licensure students. EDHD-BA-ECO or ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4020 - Science for P-2 Classrooms (3 Credits)
Focuses on teaching science in preschool, kindergarten and primary grades, including knowledge of state and district science content standards, process standards, assessment, effective instructional strategies, evidence-based practice for adapting the curriculum for diverse learners, and appropriate use of materials. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4030 - Nutrition, Health, and Safety (3 Credits)
This course focuses on nutrition, health, and safety as a key factor for optimal growth and development of young children. Content includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate classroom activities and communication with families. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4040 - Administrative Seminar (3 Credits)
Emphasizes topics required of administrators to effectively lead and manage early childhood inclusive classrooms or other related programs including leadership capacity, professionalism, administration, teaming/collaboration, communities of practice, staff management, safety, and professional development. Cross-listed with ECED 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4050 - Early Childhood Education Capstone: Planning, Instruction & Assessment (3 Credits)
This is the second course in this two-course sequence where students examine the essential features of instructional and curriculum design of developmentally appropriate and culturally sustaining inquiry based learning experiences, implementation, and assessment in the teaching and learning of young children. Prereq: ECED 4010. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECED 4010. Restriction: Professional Year Admission Required. ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4060 - Working with Families, Professionals, and Communities (3 Credits)
The focus of this course is on the human relations component of an early childhood professional's responsibilities. Course content includes family-centered practice, culturally-responsive practices, home-school partnerships, staff development and communication, collaborative teaming and community interaction. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4070 - Development and Education of Infant and Toddlers (3 Credits)
Focuses on the growth and development of infants and toddlers; responsive caregiving practices; observing development; relationship-based approach to curriculum and guidance; health, safety, and nutrition issues. Investigates state requirements for licensed infant/toddler homes and centers and accreditation and quality standards. Prereq or coreq: ECED 2930. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECED 2930. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

ECED 4102 - Developmentally Appropriate Curriculum Methods and Techniques (3 Credits)
Overview of early childhood curriculum development including processes for planning and implementing developmentally appropriate environments, materials, and experiences. Examines curriculum models and approaches for promoting development and learning in all developmental domains. Evidence-based practices for assessing young children. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4200 - Assessment for Early Childhood Classrooms (3 Credits)
This course reviews observation/assessment of young children—purpose, tools, and methods for children birth-age 8. Defines measurable outcomes, progress monitoring and use of assessment data to improve early intervention, curriculum planning, intentional teaching, instructional design, and monitor child outcomes. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

ECED 4202 - Child Guidance and Classroom Community (3 Credits)
This course presents evidence-based classroom strategies to promote social competence, build classroom community and reduce or prevent behavior problems. Emphasis is placed on understanding child development and observing behavior to make decisions for children ages birth through age 8. Cross-listed with ECED 1202. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4300 - Exceptional Learners in the Early Childhood Classroom (3 Credits)
Educating young children with disabilities in the early childhood setting: typical and atypical development, theoretical models, policy and legal requirements, evidence based research related to instructional design, intervention/curriculum planning and implementation. Introduction to embedded instruction and inclusive environments. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

ECED 4410 - Coaching for Early Childhood Professionals: Foundations (3 Credits)
The Foundations course focuses on learning, understanding and using relationship and evidence-based coaching skills in early childhood settings. Students will practice the fundamentals of coaching using a systematic, individualized, reflective approach and sharing experiences with others in the course. Cross-listed with ECED 5410. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4420 - Coaching Early Childhood Professionals: Awareness (3 Credits)
The Awareness course focuses on increasing coaches' skills at introspection, thoughtful planning, intentional application of coaching knowledge and skills, and continuous improvement. Students will integrate skills with effective application in class and real life coaching experiences, managing progress and accountability. Cross-listed with ECED 5420. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4430 - Coaching for Early Childhood Professionals: Attuning (3 Credits)
The Attuning course will integrate skills from the Foundations and Awareness courses to complete the EC Coaching Certificate. Students practice refining and altering coaching based on needs and readiness. Students learn sustainable organizational change that embed coaching in all professional practice. Cross-listed with ECED 5430. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4650 - Dual Language Learners Learning and Development (3 Credits)
The course will review current research on the learning and development of young dual language learners (birth through 8) and the classroom environments and instruction that can promote their learning. The course uses a socio-cultural framework to view children's learning. Cross-listed with ECED 5650. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

ECED 4800 - Workshop: Topics in Early Childhood Education (1-4 Credits)
Topics and credit hours vary from semester to semester. Cross-listed with ECED 5800. Repeatable. Max hours:12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

ECED 4931 - Internship I & Collaborative Learning Community (2 Credits)
ECED 4931 is the first of 3 internships in the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice in order to be licensed as an early childhood educator. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4932 - Internship II & Collaborative Learning Community (2 Credits)
ECED 4932 is the second of 3 internships in the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice in order to be licensed as an early childhood educator. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4933 - Internship III & Collaborative Learning Community (2-8 Credits)
ECED 4933 is the final internship in a series of three completed during the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice to be licensed as an early childhood educator. Cross-listed with ECED 5933. Restriction: Professional Year Admission required. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

ECED 4934 - Extended Internship & Collaborative Learning Community (1-8 Credits)
ECED 4934 is an extended internship that supports students who need extended time in an internship in order to complete their ECE program and fully develop their practice in order to be licensed as an early childhood educator. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Educational Foundations (EDFN)

EDFN 1000 - Equality, Rights & Education (3 Credits)
Examines the history of U.S. public schooling through landmark court cases. Investigates/analyzes how apartheid came to be institutionalized, how forces of desegregation achieved a series of momentous victories, and how those victories have been undermined through the resegregation of schools. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

EDFN 1010 - Lived Experiences and 21st Century Skills: An Introduction (1-5 Credits)
This internship course introduces the idea of 21st century skills embedded in various learning contexts and connecting them with lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall.

EDFN 1111 - First Year Seminar (3 Credits)
Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

EDFN 2030 - Lived Experiences and 21st Century Skills: Academic and Professional Skills (1-5 Credits)
This internship course connects 21st century skills embedded in academic and professional learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.

EDFN 2060 - Lived Experiences and 21st Century Skills: Innovation and Critical Thinking (1-5 Credits)
This internship course connects 21st century skills embedded in innovation and critical thinking learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 2080 - Lived Experiences and 21st Century Skills: Global Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in Global Literacies rich learning contexts with students' lived experiences. Internship activities include entry level career and experiences workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3000 - Undocumented Mexican Immigration (3 Credits)
The socio-legal construction of Mexican undocumented immigration from the early decades of the twentieth century to the current era is addressed. Social justice questions including access to higher education arising from the racialization of Latino/a immigrants are also examined. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

EDFN 3010 - Lived Experiences and 21st Century Skills: Wilderness Medicine in Outdoor Education (1-6 Credits)
The course provides educators who integrate outdoor education in their teaching a theoretical knowledge of and practical application of wildness medicine care, risk management in remote and austere environments. Students build self-awareness and critical thinking through reflective exercises in personal risk management, leadership, and decision making. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

EDFN 3020 - Lived Experiences and 21st Century Skills: Environmental and Civic Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in Environmental and Civic Literacies learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3070 - Lived Experiences and 21st Century Skills: Digital Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in digital literacies learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3090 - Lived Experiences and 21st Century Skills: Social Emotional Learning (1-5 Credits)
This internship course connects 21st century skills embedded in Social Emotional rich learning contexts with students' lived experiences. Internship activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 4000 - Food Justice in City & Schools (3 Credits)
Food justice examines systemic inequities in access to healthy food. The history of school/community gardens, developments in urban agriculture and school/city policies are examined. The intersection of urban agriculture, hunger, and schooling/learning is examined in school gardens and school farmer's markets. Cross-listed with EDFN 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

EDFN 4001 - Problematizing Whiteness: Educating for Racial Justice (3 Credits)
Critical Whiteness Studies provides a deeper analysis of race that accounts for both sides of the race coin: the plight of people of color AND how Whites are complicit. This class looks deeper into how race operates within White contexts and how that impacts people of color so we bridge how Whites AND people of color can work together towards a racially equitable society. Cross-listed with ETST 4010 and EDFN 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDFN 4010 - Social Foundations and Cultural Diversity in Urban Education (3 Credits)
This course focuses on the role of cultural diversity in the United States school system and what this means for educators oriented toward social justice. The intention of this course is to have teacher candidates engage in exploring the most salient issues surrounding education in the United States, developing an understanding of the complex relationships between schools and the larger society of which they are a part. This course closely examines important contemporary and historical societal issues such as race, social class, gender, ethnicity, sexual identity, politics, and dynamics of power and privilege. Cross-listed with EDFN 5010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students.

EDFN 4040 - Lived Experiences and 21st Century Skills: Collaboration (1-5 Credits)
This internship course connects 21st century skills embedded in collaborative learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 4050 - Lived Experiences and 21st Century Skills: Communication (1-5 Credits)
This internship course connects 21st century skills embedded in communication learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

Education & Human Development (EDHD)

EDHD 1019 - Introduction to Urban Education (3 Credits)
In this course you will examine the sociological issues related to urban schools, communities, and teaching. We will looks at such topics as school culture, diversity, ethnicity, and social realities in American schools. Students will critically examine current education issues that affect their lives, their local community, and P-12 classrooms throughout the state and the country. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDHD 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshmen level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

EDHD 1930 - Community Based Field Experience & Seminar (3 Credits)
Students learn the dispositions of a community-grounded educator and develop an asset-based lens for working with students, families, and communities through 60 hours of required field experience and a mediated seminar. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDHD 2050 - Current Topics in Education and Human Development (1-3 Credits)
Current topics that explore community and educational settings in Education and Human Development (EDHD) to be selected by the instructor. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

EDHD 2840 - Independent Study in Education & Human Development (1-6 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

EDHD 2910 - Service Learning in Education and Human Development (1-4 Credits)
This course prepares our students to become responsible and resourceful citizens who partner with community organizations and work to serve a wide range of needs and issues within culturally and linguistically diverse environments. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

EDHD 2930 - Learning & Development Field Experience & Seminar (2-3 Credits)
Teacher candidates engage in field experience 2, half-days per week in early childhood and primary classrooms working with children to support literacy learning while also observing, documenting and reflecting on how learning & development is facilitated. Prereq or coreq: LCRT 3720 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: LCRT 3720 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

EDHD 3930 - Diverse Learners Field Experience & Seminar (3 Credits)
EDHD 3930 is a comprehensive clinical block field experience designed to support teacher candidates' learning of issues and practices relevant to students with disabilities and English language learners. A seminar will mediate teacher candidates' experiences from their various classroom settings. Prereq or Coreq: SPED 4030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPED 4030.

EDHD 4050 - Special Topics in Education and Human Development (1-3 Credits)
Advanced study of special topics that examine community and educational settings in Education and Human Development (EDHD) to be selected by the instructor. Maybe repeated for credit. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Instructional Technology (INTE)

INTE 2000 - Digital Teaching and Learning (3 Credits)
Survey of technology for: (1) your own learning, informally and in classes; (2) your students' learning when you become a teacher; and (3) sharing with peers and colleagues. Use tools to address problems of equity, access, and learning needs. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 2500 - #Learning: Digital Spaces and Far Out Places (3 Credits)
Digital media have transformed where, how, and why people learn. In this course we examine contemporary developments in digital media and learning. and explore topics such as social networking and media, virtual and augmented reality, civic media, gamified learning, and mobile learning. This is a hands-on and minds-on course where we immerse ourselves in digital spaces to build projects that support our civic, communication and collaboration, and creative interests. Come and learn to use digital media to enhance your life, community, and beyond! Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

INTE 4000 - Maker Studio (3 Credits)
The maker studio is a collaborative practicum within the context of makerculture, projectbased learning, and learning experience design. The course focuses on the practical translation of learning design theory to learning design reality, presenting learners with challenges to be resolved with creative solutions. Cross-listed with INTE 5000. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4100 - Learning Experience Design (3 Credits)
Instructional design is the process used to analyze, design, develop, and evaluate learning solutions. You will identify a gap in learning or performance and design a learning solution in the form of courses units, modules, and other instructional resources. Cross-listed with INTE 5100. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 4300 - Critical Digital Literacies (3 Credits)
Critical Digital Literacies surveys intersections among literacy studies, digital media, and critical education. The course blends theory with practice, and design with leadership, to immerse students among the communities, developments, and debates pertinent to critical digital literacies. Cross-listed with INTE 5300. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students
Typically Offered: Fall.

INTE 4320 - Games and Learning (3 Credits)
This course examines the use of games for learning and education across formal and informal environments. Students will survey contemporary learning theory, media, trends, and challenges related to designing and playing games in informal, community-based, online, and school settings. Cross-listed with INTE 5320. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4340 - Learning with Digital Stories (3 Credits)
This course reviews the uses of digital storytelling for learning. Develop and publish a short digital story that tells something important about you and your interests. Explore ways that creating or using digital stories can aid learning and personal growth. Cross-listed with INTE 5340. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4660 - Developing Self-Paced Online Modules (3 Credits)
Students use a variety of tools and strategies to develop self-paced eLearning courseware, such as tutorials. The course covers critical aspects of the instructional development process that support the creation of effective self-paced online learning experiences, materials and resources. Cross-listed with INTE 5660. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 4665 - Learning with Social Media and Networking (3 Credits)
The focus of this course is on how educators leverage networked social tools, technologies, and environments to address educational needs, opportunities, and problems of practice; and establish and nurture their own professional learning through participation in digital cultures. Cross-listed with INTE 5665. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4680 - Producing Media for Learning (3 Credits)
Students develop and integrate media resources into eLearning environments, applying principles of media selection and multimedia learning. Students explore a variety of tools for producing audio, video, and multimedia content and examine ways to enhance eLearning courses through multimedia presentation and engagement resources. Cross-listed with INTE 5680. Max hours: 3 Credit Hours.
Grading Basis: Letter Grade

INTE 4711 - Creative Designs for Instructional Materials (3 Credits)
This course is a project-based exploration of design theories, principles, and best practices for communicating information to diverse learning audiences. Students apply unique design approaches and formats to the creation of materials for teaching, learning, and being of service to underrepresented communities. Cross-listed with INTE 5711. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

Literacy, Language & Culturally Responsive Teaching (LCRT)

LCRT 2000 - Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities (3 Credits)
This course explores both classic and contemporary children's and adolescent literature and media in traditional and digital texts, specifically focusing on developing literary understandings, exploring perspectives and personal responses to literature, and inquiring into trends and issues. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

LCRT 3720 - Introduction to Writing Development and Teaching (3 Credits)
This course introduces students to writing development in children from early childhood through 5th grade. Students will learn how to analyze student writing for strengths and needs in order to design effective writing instruction. Prereq or coreq: EDHD 2930 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 2930 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours.

LCRT 3815 - Once Upon a Time: Family Literacies in Culturally Diverse Communities (3 Credits)
This course uses sociocultural theory and perspectives as these relate to family systems and the intersection of culture, literacies, and education. Students develop an understanding about the ways reading, writing and language are embedded in family's homes, schools, and communities. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

LCRT 4000 - Elementary Literacy Instruction and Assessment Part 1 (3 Credits)
This course develops an appreciation, understanding, and application of literacy assessment and instruction in PK-6 classrooms. Interns learn how to use various types of assessment and instruction for reading and writing that address the literacy needs of PK-6 Students. Cross-listed with LCRT 5000. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4001 - Elementary Literacy Instruction and Assessment Part 2 (3 Credits)
This course develops an appreciation, understanding, and application of literacy assessment and instruction in PK-6th classrooms. Interns learn how to use various types of assessment and instruction for reading and writing that address the literacy needs of PK-6th Students. Cross-listed with LCRT 5001. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4100 - Secondary Literacy Instruction and Assessment (3 Credits)
Provides knowledge and practice in using specific literacy methods to enhance students' content learning and literacy development in middle schools and high schools. Various methods of literacy assessment to guide instruction for students are emphasized. Instructional strategies for special populations, especially speakers of English as a second language, are also addressed. Cross-listed with LCRT 5100. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4200 - Theory and Methods of Teaching Secondary English (3 Credits)
Focuses on teaching/learning theories and practical classroom strategies for teaching English Language Arts to adolescent learners in middle school, junior high school and high school classes. Cross-listed with LCRT 5200. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4201 - Adolescent Literature (3 Credits)
Reading and evaluating fiction and non-fiction appropriate for students in middle and senior high school. Emphasis is on modern literature. Cross-listed with LCRT 5201. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4210 - Literacy Development Pre K-3rd Grade (3 Credits)
Focuses on children's developing literacy understandings and proficiencies beginning in the preschool years. Attention is given to language development, assessment, and instruction in pre-kindergarten through third grade, partnerships with community literacy institutions provide information on their use for literacy development. Cross-listed with LCRT 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4220 - Literacy Routines & Assessment, Pre K-3rd Grade (3 Credits)
This course will focus on the routines and practices which allow for student specific instruction and assessment in the Early Literacy classroom. Participants will examine and critique current literacy routines and assessments needed to best meet the needs of culturally and linguistically diverse children. Cross-listed with LCRT 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4230 - Early Literacy Instruction (3 Credits)
Participants will examine Pre K-3rd grade literacy instruction to understand how to meet the needs of young students. The course will analyze instructional practices for young gifted, special needs and English language learning students to best meet the needs of all learners. Cross-listed with LCRT 5230 Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4710 - Primary Literacy for Diverse Learners: Pre K-3rd Grade (3 Credits)
This course provides teachers with a basic understanding of reading and writing development in preschool and early primary grades, while considering specific strategies for using and teaching reading and writing in early primary grades (pre-K-3). This course is cross-listed with LCRT 5710. Prereq or coreq: EDHD 2930 and LCRT 3720. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 2930 and LCRT 3720. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours.

LCRT 4720 - Writing Development, Instruction and Assessment (3 Credits)
This course combines examination of current research into effective practices of teaching writing with students' own writing projects. The curriculum serves teachers in all subjects and grades K-12. Readings, groupings, and discussions are differentiated according to specific grade(s) taught. Cross-listed with LCRT 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade

Math Education (MTED)

MTED 3040 - Mathematics for Elementary Teachers (3 Credits)
Key mathematical concepts for K-6 teachers informed by NCTM & Common Core State Standards, such as place-value number systems, rational, proportional, & algebraic reasoning, geometrical concepts, & statistical/probability ideas. Students' meaningful, enjoyable learning is promoted via problem solving activities. Cross-listed with MTED 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4002 - Elementary Mathematics Teaching I (3 Credits)
Prepares elementary teachers to teach mathematics to PreK-6 students while applying principles of the National Council of Teachers of Mathematics to mathematical learning. Teachers explore ways to help all elementary students become flexible and resourceful mathematical problem solvers. Cross-listed with MTED 5002. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4003 - Elementary Mathematics Teaching II (3 Credits)
Develops the mathematical and pedagogical understandings and competence of elementary teachers, focusing on instructional assessment, principles, and practices. Cross-listed with MTED 5003. Prereq: MTED 4002 or MTED 5002. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MTED 4002 or 5002. Restriction: Professional Year Admission Required. ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4300 - Curriculum and Methods for Teaching Mathematics (3 Credits)
Fosters teachers' use of task-based mathematics pedagogy, including orchestrating students' mathematical discourse, to develop mathematics classrooms in which the teacher builds from students' current understandings, accommodates for students' differences, and has high expectations for all students. Cross-listed with MTED 5300. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4301 - Assessment and Equity in Mathematics Instruction (3 Credits)
Examines mathematics assessment and equity from both a teacher's and a student's perspective. Focuses on assessment as a process, during which a teacher gathers evidence of students' mathematical knowledge and understanding and then uses that evidence to make instructional decisions. Restriction: Professional Year Admission required. Cross-listed with MTED 5301. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4621 - A World of (Different) Numbers: Quantity and Operation (3 Credits)
Develops K-12 teachers' understanding of number systems and the ability to foster students' understanding. Focuses on number, quantity, and operation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 5621. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4622 - Expanding Conceptions of Algebra (3 Credits)
Develops K-12 teachers' understanding of algebra concepts and the ability to foster students' understanding. Focuses on equivalence, variable, covariation, and function. Applicable to teaching students at all grade levels in line with the K12 Common Core Standards. Cross-listed with MTED 5622. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4623 - Geometrical Ways of Reasoning (3 Credits)
Develops K-12 teachers' geometrical reasoning and the ability to foster students' reasoning. Addresses transformation, measurement, classification, objects, imagery, formulas, and investigation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 5623. Max hours: 3 Credits.
Grading Basis: Letter Grade

Science Education (SCED)

SCED 4004 - Elementary Science Teaching (3 Credits)
This course explores issues in elementary school science learning and teaching. Teacher candidates will develop knowledge of the nature of science and science content, engage in scientific inquiry, work to identify student conceptions, and plan and enact science instruction. Cross-listed with SCED 5004. Restriction: Professional Year Admission required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SCED 4050 - Introduction to Science Teaching and Learning (2 Credits)
Focus on conceptual development, conceptual change, collaborative learning, students' conceptions of various topics in science, practical issues encountered in facilitating learning, managing the classroom, formative and summative assessment, and differentiating instruction in a collaborative environment. Seminar for Learning Assistants. Student must be serving as a Learning Assistant in the CU Denver LA program. Max hours: 2 Credits.
Grading Basis: Letter Grade

SCED 4340 - Equity & Culture in Science Education: Local/Global (3 Credits)
This course examines literature in science education related to issues of culture and equity. Topics will be framed by an understanding of equity in diverse classrooms and how it informs research, curriculum and instruction. Cross-listed with SCED 5340 and ENVS 5340. Max hours: 3 Credits.
Grading Basis: Letter Grade

SCED 4350 - Issues and Trends in Science Education (3 Credits)
Explores the current issues and trends in science education related to theory, pedagogy, practices, curriculum, and other contemporary topics. Cross-listed with SCED 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade

SCED 4400 - Theory and Pedagogy of Science Learning (3 Credits)
Examines current issues, strategies, materials, and technology related to the teaching and learning of science at the middle and secondary school levels. Science curriculum, teachers' pedagogical content knowledge, and research in science education are investigated. Cross-listed with SCED 5400. Restriction: Professional Year Admission required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SCED 4401 - Inquiry Science Pedagogy and Practices (3 Credits)
An in-depth study of inquiry science pedagogy and practices and how inquiry science supports standards-based education to make science accessible to ALL learners. The course provides a review of research on pedagogy and practices that support student understanding, problem solving and creativity through the use of inquiry science. Prereq: Concurrent enrollment in an internship or permission of instructor is required. Cross-listed with SCED 5401. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

Special Education (SPED)

SPED 1030 - Understanding (dis)Ability in Contemporary Classrooms (3 Credits)
This course provides an overview of special education by examining the history of special education, construction of dis/ability, characteristics of individuals with disabilities, aspects of disproportionality, and introduction to evidence-based instructional practices. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 4010 - Intentional Interventions for Exceptional Learners (3 Credits)
This course provides instructional strategies and interventions for students with a wide variety of disabilities. Implications for targeted and intensive interventions and assessment are considered. Cross-listed with SPED 5010. Restriction: Professional Year Admission required. Max hours: 3 Credits
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4030 - Understanding (dis)Ability in Contemporary Classrooms (3 Credits)
This course provides an overview of special education by examining the history of special education, construction of dis/ability, characteristics of individuals with disabilities, aspects of disproportionality, and introduction to evidence-based instructional practices. Prereq or Coreq: EDHD3930 or ECED4933 or ECED4934. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: EDHD3930 or ECED4933 or ECED4934

SPED 4140 - Assessment: Inquiry, Instruction, & Intervention (3 Credits)
Using a variety of assessment tools, students will focus on the educational assessment methods and procedures used in decision making and program planning for students with exceptional learning needs, with attention to pervasive issues pertaining to students from culturally and linguistically diverse backgrounds. Cross-listed with SPED 5140. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4151 - Slashing Stigmas: Promoting Positive Behaviors (3 Credits)
This course works to transform perspectives and practices related to supporting student behavior in classrooms. Students will learn important considerations related to culture, race, gender and socioeconomic status, as they intersect with behavior and social emotional development.
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours or students in the Education Studies Minor. Cross-listed with SPED 5151. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours or students in the Education Minor EDST-MIN

SPED 4300 - Family, Professional, and Community Collaboration (3 Credits)
Focuses on the development of competencies in consultation and collaboration. The overall purpose is to encourage the development of understanding and skills that enhance a teacher's ability to work and communicate effectively with school personnel, including paraprofessionals and parents. The goal of collaboration is to support and determine together the instructional scenarios that best meet the needs of students. Specific competencies include problem solving, conflict resolution, data collection or observation skills, conferencing, facilitating meetings, and interacting with others while respecting diverse discourses and multicultural backgrounds. Cross-listed with SPED 5300.
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor.

SPED 4400 - Universal Design for Learning (UDL) (3 Credits)
This course introduces Universal Design for Learning (UDL), an important educational philosophy and set of principles & techniques that focuses on strategies and tools to help ALL students by accommodating their differences in inclusive classroom settings. Cross-listed with SPED 5000.
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor.

SPED 4500 - Transition and Secondary Methods in Special Education (3 Credits)
This course provides school leaders and practitioner with an understanding of the special education transition process as specified by federal and state guidelines, as well as effective teaching and learning strategies for secondary youth with disabilities. Cross-listed with SPED 5500. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours, and Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours, and Professional Year Admission required.

SPED 4600 - Special Education Law: Ethics and Compliance (3 Credits)
Designed for school leaders and professionals to understand special education law and compare and contrast service delivery options . Cross-listed with SPED 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 4740 - Intersections of Literacy, Culture, & Exceptionality (3 Credits)
This course provides a foundational understanding of the complex intersections between literacy, culture, language, learning, and students with (dis)abilities. A primary goal is to address the particular needs of culturally and linguistically diverse learners with exceptionalities, while also exploring the distinctions between language development and learning disabilities. Cross-listed with SPED 5740. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

SPED 4780 - Literacy Intervention for Exceptional Learners (3 Credits)
Provides the practitioner with an understanding of research-validated approaches, strategies, assessment tools and issues related to effective literacy instruction for students performing significantly below grade level. Cross-listed with SPED 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 4931 - Internship & Learning Community I (2 Credits)
SPED 4931 is the first internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4932 - Internship & Learning Community II (2 Credits)
SPED 4932 is the second internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4933 - Internship & Learning Community III (6 Credits)
SPED 4933 is the final internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

Science, Technology, Engineering & Math Education (STME)

STME 4001 - Planning for Learning in Mathematics and Science (3 Credits)
This course explores aspects of complex curriculum and instructional concepts through the lens of mathematics and science educators. A focus will include: Socio-cultural learning theory in Math and Science; standards-based instruction; instructional design; formative & summative assessment, and differentiation so that meaningful instruction becomes accessible to all students. Cross-listed with STME 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade

STME 4051 - STEM Capstone: Secondary Education (3 Credits)
This course provides Secondary STEM Education students with a capstone learning experience that integrates knowledge of STEM content, students, and school context into socially-just and culturally responsive practices. Cross-listed with STME 5051. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

Urban Teacher Education (UEDU)

UEDU 1930 - Introduction to Socially Just Education (3 Credits)
This course examines sociological issues concerning urban schools, communities and provides an overview of school culture, diversity and social realities in American schools. Students will critically examine education issues that affect their lives, their community and classrooms throughout the country. Max hours: 3 Credits.
Grading Basis: Letter Grade

UEDU 4040 - Planning for Learning (3 Credits)
This course explores multiple aspects of student learning: Including 1) standards-based instruction 2) cultural responsive instructional design, 3) assessment and data, and 4) differentiation in curriculum and instruction so that meaningful instruction becomes accessible to all students. Restriction: Professional Year Admission required. Cross-listed with 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

UEDU 4050 - Capstone: Planning, Instruction & Assessment (3 Credits)
The purpose of this course is to re-visit multiple aspects of instructional and curriculum design, implementation, and evaluation. The goal is to promote access to knowledge for all learners, including those who are diverse linguistically and culturally and those identified with special needs. Restriction: Professional Year Admission required. Cross-listed with UEDU 5050. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4052 - English/LA & Social Studies Capstone: Secondary Ed (3 Credits)
Through teaching units of instruction in school placements, secondary English/LA and Social Studies teacher candidates learn both unit and lesson design, assessment of student learning, and differentiation of curriculum and instruction to promote access to knowledge for all learners. Cross-listed with UEDU 5052. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4464 - Methods of Teaching Social Studies (3 Credits)
One of two courses on linguistically and culturally relevant social studies teaching. Course content includes geography, economics, civics. Cross-listed with UEDU 5464. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4465 - Methods of Teaching History (3 Credits)
One of two courses on linguistically and culturally relevant history teaching. Cross-listed with UEDU 5465. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4840 - Independent Study (1-3 Credits)
Independent Study in Urban Community Teacher Education, Topic of study varies according to project. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

UEDU 4931 - Internship & Lrng Comm I (2 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Cross-listed with UEDU 5931. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4932 - Internship & Lrng Comm II (2 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Restriction: Professional Year Admission required. Cross-listed with UEDU 5932. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4933 - Internship & Lrng Comm III (2-6 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Restriction: Professional Year Admission required. Cross-listed with UEDU 5933. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU
Typically Offered: Fall, Spring.

UEDU 4934 - Extended Internship & Learning Community (1-8 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, they participate in the activities of a professional learning community. Cross-listed with UEDU 5934. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Early Childhood Education License, BA - Rural Partnership with Lamar Community College

Introduction

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Early Childhood Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate early childhood teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program in Lamar, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Early Childhood Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Early Childhood Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
ECED 2000	Early Childhood Education as a Profession	3
ECED 2930	Infant & Toddler Field Experience & Seminar	3
ECED 4030	Nutrition, Health, and Safety	3
ECED 4040	Administrative Seminar	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
ECED 4202	Child Guidance and Classroom Community	3
ECED 4300	Exceptional Learners in the Early Childhood Classroom	3
EDFN 1000	Equality, Rights & Education	3
EDHD 1930	Community Based Field Experience & Seminar	3
HDFR 2110	Child Ecology	3
INTE 2000	Digital Teaching and Learning	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
Major Courses Remaining		
CLDE 2000	CLDE Foundations [1]	3
ECED 4060	Working with Families, Professionals, and Communities	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
LCRT 3720	Introduction to Writing Development and Teaching	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
Professional Year Courses		
A minimum grade of B- is required in each professional yearcourse		
ECED 4200	Assessment for Early Childhood Classrooms	3
ECED 4650	Dual Language Learners Learning and Development	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
ECED 4931	Internship I & Collaborative Learning Community	2
ECED 4932	Internship II & Collaborative Learning Community	2

ECED 4933	Internship III & Collaborative Learning Community	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**87-88**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Early Childhood Education License, BA - Rural Partnership with Northeastern Junior College

Introduction

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Early Childhood Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate early childhood teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Northeastern Junior College (NJC), you will benefit from a highly supportive program with a strong rural focus. T-PREP at NJC students complete the first half of their program at NJC and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Early Childhood Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the NJC campus in Sterling, Colorado; (b) in boundaryless classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in Northeastern corner of Colorado, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Northeastern or CU Denver.

Program Delivery

- This is an on-campus program in Sterling, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Early Childhood Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Early Childhood Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
ECED 2000	Early Childhood Education as a Profession	3
ECED 4202	Child Guidance and Classroom Community	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4040	Administrative Seminar	3
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
ECED 4060	Working with Families, Professionals, and Communities	3
ECED 4300	Exceptional Learners in the Early Childhood Classroom	3
ECED 2930	Infant & Toddler Field Experience & Seminar [1]	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
Major Courses Remaining		
CLDE 2000	CLDE Foundations [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3

EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
ECED 4030	Nutrition, Health, and Safety	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
ECED 4931	Internship I & Collaborative Learning Community [1]	2
ECED 4932	Internship II & Collaborative Learning Community [1]	2
UEDU 4040	Planning for Learning [1]	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1 [1]	3
MTED 4002	Elementary Mathematics Teaching I [1]	3
SCED 4004	Elementary Science Teaching [1]	3
ECED 4933	Internship III & Collaborative Learning Community [1]	6
UEDU 4050	Capstone: Planning, Instruction & Assessment [1]	3
ECED 4200	Assessment for Early Childhood Classrooms [1]	3
ECED 4650	Dual Language Learners Learning and Development [1]	3
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA.		
Total Hours		**87-88**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in specified courses must consult with their advisors about a plan to retake the course or complete additional work.

Early Childhood Education License, BA - Rural Partnership with Otero College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Early Childhood Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate early childhood teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Otero College in La Junta, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Otero College students complete the first half of their program at Otero and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a teaching license with an endorsement in Early Childhood Education. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Otero campus in La Junta; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the La Junta region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero College or CU Denver.

Program Delivery

- This is an on-campus program in La Junta with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Early Childhood Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Early Childhood Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
ECED 2000	Early Childhood Education as a Profession	3
ECED 2930	Infant & Toddler Field Experience & Seminar	3
ECED 4030	Nutrition, Health, and Safety	3
ECED 4040	Administrative Seminar	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
ECED 4202	Child Guidance and Classroom Community	3
ECED 4300	Exceptional Learners in the Early Childhood Classroom	3
EDFN 1000	Equality, Rights & Education	3
EDHD 1930	Community Based Field Experience & Seminar	3
HDFR 2110	Child Ecology	3
INTE 2000	Digital Teaching and Learning	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
Major Courses Remaining		
CLDE 2000	CLDE Foundations [1]	3
ECED 4060	Working with Families, Professionals, and Communities	3

EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
LCRT 3720	Introduction to Writing Development and Teaching	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
Professional Year Courses		
A minimum grade of B- is required in each professional yearcourse		
ECED 4200	Assessment for Early Childhood Classrooms	3
ECED 4650	Dual Language Learners Learning and Development	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
ECED 4931	Internship I & Collaborative Learning Community	2
ECED 4932	Internship II & Collaborative Learning Community	2
ECED 4933	Internship III & Collaborative Learning Community	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**87-88**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Early Childhood Education License, BA - Rural Partnership with Trinidad State College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Early Childhood Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate early childhood teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Trinidad State College (TSC), you will benefit from a highly supportive program with a strong rural focus. T-PREP at TSC students complete the first half of their program at TSC and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Early Childhood Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Trinidad or Alamosa campus; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the Trinidad or Alamosa region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at TSC or CU Denver.

Program Delivery

- This is an on-campus program in Trinidad and Alamosa with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Early Childhood Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Early childhood Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements		
ECED 2000	Early Childhood Education as a Profession	3
ECED 2930	Infant & Toddler Field Experience & Seminar [1]	3
ECED 4030	Nutrition, Health, and Safety	3
ECED 4040	Administrative Seminar	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
ECED 4202	Child Guidance and Classroom Community	3
ECED 4300	Exceptional Learners in the Early Childhood Classroom [1]	3
EDFN 1000	Equality, Rights & Education	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
INTE 2000	Digital Teaching and Learning	3
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
ECED 4060	Working with Families, Professionals, and Communities	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3

EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
ECED 4200	Assessment for Early Childhood Classrooms	3
ECED 4650	Dual Language Learners Learning and Development	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
ECED 4931	Internship I & Collaborative Learning Community	2
ECED 4932	Internship II & Collaborative Learning Community	2
ECED 4933	Internship III & Collaborative Learning Community	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**87**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Early Childhood Education Licensure Track, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The ECE track has two options: Licensure and Non-licensure. Information regarding the Non-licensure track can be found here (p. 902).

The Early Childhood Education (ECE) track in the Education and Human Development major has a strong focus on engaging Colorado's rapidly diversifying student and family population. It combines research with contextually relevant classroom experiences. Together with your peers and professors, you will critically explore the robust and evolving knowledge base relevant to the field of early care and education as you engage with experiences that elevate your understanding of children's thinking, culturally sustaining pedagogy, inclusive curricular and environmental design, and assessment and documentation of children's learning. Our program's history of deeply responsive community partnerships creates compelling and supportive opportunities for students to fully experience, and become inspired, by the daily life of Colorado educators. All ECE track students have the opportunity to take all required courses to fulfill the State of Colorado's Director qualifications and become leaders in the field of early learning.

Licensure Track

Students who select the 126 credit hour licensure track fulfill all requirements for a license to teach children Birth-Age 8 in Colorado's school districts and community-based early childhood centers. This track prepares students to become teachers of children up through third grade. Field-based experiences take place in the School of Education's Professional Development network of partner schools.

Students in this track have the opportunity to apply for the Bachelors to Masters Program (p. 904) (BAMA) during their junior year. The BAMA allows students to take 9 credits of their professional year program at the graduate level and apply them to one of 8 MA degrees in the SEHD.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Early Childhood Education Track.
2. Students must pass the appropriate Praxis Exam or demonstrate competency through another option as outlined by the Colorado Department of Education in order to be licensed.
3. Application to the last year of the program, the Professional Year, is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Early Childhood Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
ECED 4650	Dual Language Learners Learning and Development	3
ECED 4060	Working with Families, Professionals, and Communities	3
EDFN 1000	Equality, Rights & Education	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
HDFR 2110	Child Ecology	3
or HDFR 3050	Children's Thinking and Assessment	
INTE 2000	Digital Teaching and Learning	3
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
ECED 2000	Early Childhood Education as a Profession	3
ECED 4030	Nutrition, Health, and Safety	3
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
ECED 4040	Administrative Seminar	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4200	Assessment for Early Childhood Classrooms	3
ECED 4202	Child Guidance and Classroom Community	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
ECED 2930	Infant & Toddler Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
Professional Year Courses		

A minimum grade of B- is required in each course.

LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
SCED 4004	Elementary Science Teaching	3
MTED 4002	Elementary Mathematics Teaching I	3
ECED 4931	Internship I & Collaborative Learning Community	2
ECED 4932	Internship II & Collaborative Learning Community	2
ECED 4933	Internship III & Collaborative Learning Community	6
General Electives		
Additional General Electives hours may be needed to reach the required hours for the BA		
Total Hours		**87-88**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

Non-Licensure Track

A 120 credit hour track is ideal for students who currently and/or intend to work in community-based early childhood environments that serve children from infancy-age five years is also available.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Early Childhood Education Non-Licensure Track, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information. The ECE track has two options: Licensure and Non-Licensure. Information regarding the Licensure Track can be found here (p. 900).

The Early Childhood Education (ECE) track in the Education and Human Development major has a strong focus on engaging Colorado's rapidly diversifying student and family population. It combines research with contextually relevant classroom experiences. You'll learn with innovative faculty members who are locally and nationally recognized for their research in early childhood education. Together with your peers and professors, you will critically explore the robust and evolving knowledge base relevant to the field of early care and learning as you engage with experiences that elevate your understanding of children's wonderings, culturally sustaining education, inclusive curricular and environmental design, and assessment and documentation of children's thinking and learning. Our program's history of deeply responsive community partnerships creates compelling and supportive opportunities for students to fully experience, and become inspired by, the daily life of educators in Colorado.

Community-based Early Childhood Education

The Community-based Early Childhood Education (ECE) track in the Education & Human Development BA focuses on the passion and commitment CU Denver students have to work in diverse community-based early childhood education settings supporting children ages birth-5 and their families. The program is designed for students who currently work in these settings or intend to become employed before they graduate within a community based early childhood context. A core principle of this pathway is accessibility of the BA for working early childhood professionals and those professionals with several years of prior experience in birth-five classrooms.

Program Features

The Community Based ECE BA is 120 credit hours. Unique features include:

- Courses are grounded in real-world ECE contexts and experiences with children and families in culturally, linguistically and racially diverse classroom settings.
- In-depth field-experiences throughout the program that take place in the ECE settings where you work. The intent is to make the program accessible for working early childhood professionals.
- If you are not currently employed, you can enroll in coursework and be placed in volunteer field experiences for the first two clinical field experience blocks (EDHD 1930 and ECED 2930). Students must be employed in an ECE birth-5 context by the time they enroll for EDHD 2930 (typically junior year) and for their final senior year of internships.
- Flexible transfer policies include the opportunity to bring in certificates and competencies that you have already achieved which can be assessed for credit to potentially replace courses within the program.
- High engagement with faculty who have deep experience in local community contexts while also recognized for their work regionally, nationally and internationally in early childhood.
- Opportunity to collaborate with a broader network of Early Childhood educators who serve as coaches and instructors in the program.
- Save money and time by opting into BA to MA (BAMA). In BAMA, three classes you take during your senior year double count towards both your bachelor's and your master's degrees and are billed at the undergraduate tuition rate.

Together with your peers and professors, you will critically explore the robust and evolving knowledge base relevant to the field of early care and learning as you take courses and work in ECE contexts that elevate your understanding of children's wonderings, culturally sustaining education, inclusive curricular and environmental design, and assessment and documentation of children's thinking and learning. Our program's history of deeply responsive community partnerships creates compelling and supportive opportunities for students to fully experience, and become inspired by, the daily life of Early Childhood educators in Colorado.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 120 semester hours for the EDHD - Community-Based Early Childhood Education BA Track
2. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Early Childhood non-licensure requirements unless otherwise specified.
3. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
ECED 2000	Early Childhood Education as a Profession	3
ECED 4030	Nutrition, Health, and Safety	3
ECED 4040	Administrative Seminar	3
ECED 4060	Working with Families, Professionals, and Communities	3

ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	3
ECED 4202	Child Guidance and Classroom Community	3
ECED 4300	Exceptional Learners in the Early Childhood Classroom [1]	3
or SPED 4030	Understanding (dis)Ability in Contemporary Classrooms	
ECED 4650	Dual Language Learners Learning and Development	3
ECED 4010	Inquiry and the Disciplines	3
ECED 4070	Development and Education of Infant and Toddlers	3
ECED 4200	Assessment for Early Childhood Classrooms	3
EDFN 1000	Equality, Rights & Education	3
HDFR 2110	Child Ecology	3
or HDFR 3050	Children's Thinking and Assessment	
CLDE 2000	CLDE Foundations [1]	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
ECED 2930	Infant & Toddler Field Experience & Seminar [1]	3
ECED 4933	Internship III & Collaborative Learning Community [1]	8
General Electives		
Additional courses may be needed to reach the required 120 hours for the BA		
Total Hours		**62**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

Notes

An ECE Licensure track is also available for students interested in fulfilling the State of Colorado's ECE licensure requirements.

Students who select the 126 credit hour licensure track fulfill all requirements for a license to teach children Birth-Age 8 in Colorado's school districts and community-based early childhood centers. This track prepares students to become teachers of children up through third grade. Field-based experiences take place in the School of Education's Professional Development network of partner schools. Please see Early Childhood Education BA - Licensure Track (p. 900) for more information.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Education and Human Development BAMA with Multiple MA Options

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The EDHD BA to MA program (BAMA) in the School of Education and Human Development allows students to combine their BA in Education and Human Development with an MA suited to their needs. In this degree students can complete both the undergraduate degree and a master's degree in as little as five years.

This program is an uninterrupted enrollment plan that leads to both a bachelor's degree and a master's degree. A student follows a prescribed BA to MA program plan of study, from the EDHD BA and choosing from one of eight MA degree options:

- Culturally and Linguistically Diverse Education
- Literacy Education
- STEM Education
- Learning, Design and Technology
- Learning Developmental and Family Studies
- Early Childhood Education
- Special Education
- Research and Evaluation Methods

Program Delivery

- This is an on-campus program with a variety of delivery options for many courses including face-to-face, hybrid, evening, and online courses.

Declaring This Degree

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn this degree, students must satisfy all requirements in the EDHD BA in addition to individual requirements for the chosen MA.
2. Up to nine credits of the EDHD BA will be taken at the master's level and apply to both the BA and the chosen MA.
3. Students will complete an additional 21 credits to finish the MA degree (the BAMA does not apply to added endorsements).
4. Students must select and apply to their chosen MA in their junior year during the professional year application period.
5. The process includes an essay, letters of recommendation and an interview.
6. A 3.0 GPA and good-standing in the program is required for admission.
7. Students interested in the BA to MA program should meet with an undergraduate academic advisor during their junior year. Students apply directly to CU Denver's School of Education & Human Development.
8. Students accepted into the BAMA must maintain a minimum 3.0 cumulative grade point average and receive a B- or better in all coursework.

Tuition and Fees

Graduate level tuition is on par with undergraduate tuition. Students are assessed tuition at the course level.Financial aid awards will cover graduate courses taken by undergraduate students. We offer a variety of scholarships and grants. For a complete list of financial aid opportunities visit www.ucdenver.edu/education/scholarships (http://www.ucdenver.edu/education/scholarships/).

Degree Confirmation

Students are eligible to receive the BA in Education and Human Development degree once they have successfully completed 126 semester hours and all CU Denver undergraduate degree requirements. The MA will be conferred once the student has completed all requirements for the Master of Arts degree. Students have 7 years from the semester in which the first graduate-level course was taken complete the MA.

Eight Master's Degree Options

Culturally and Linguistically Diverse Education

For those who are passionate about elevating the status of bilingualism and inclusivity in classrooms and championing the strengths and assets of children who speak and are learning multiple languages, this degree is the perfect option.

Early Childhood Education

This degree is for those who have a passion for working with young children, families and communities during the critically important stage of early childhood. The program prepares highly competent professionals who are leaders and advocates known for embracing the whole child in inclusive, culturally and linguistically diverse settings.

Learning Design & Technology

Students will complete fully online courses that address relevant, emerging learning technology topics such as active and experiential pedagogy, media and maker projects, integration of technology, blended and online learning, open educational resources, digital storytelling, creative instructional materials design, and technology adoption and leadership.

Learning, Developmental and Family Sciences

Through this program, you will be prepared to view culturally and linguistically diverse families from a strengths-based perspective and to serve them in a variety of contexts. Students will learn to facilitate the teaching/learning process and to lead and work in community-based environments.

Literacy Education

Literacy is often understood as a core competency and a gateway to all other learning. With this in mind, this degree provides educators with advanced knowledge and preparation to work with diverse student

populations, K-12, as they develop reading, writing and oral language skills.

Research & Evaluation Methods

Our students come from a wide variety of backgrounds, but have the common thread of questioning status quo and striving to explore 'what works' in order to improve our educational system. This program is very practitioner-focused. There is a strong focus on improvement and evaluation of current practices, programs and policies.

Special Education

This degree prepares candidates for a holistic representation and understanding of the students from an academic and behavioral perspective. In the program, you will not only learn ways to accommodate, differentiate and assess materials for students, but you will also understand how to manage a caseload of students. From working with families to teachers to agencies, you will be able to develop skills in collaboration, consultation and transition. As a result, you will be an asset to your building and the families/students you serve.

STEM Education

When you decide to pursue this degree, you will learn practical and valuable knowledge and skills to help you engage your students in exciting STEM content. Our program focuses on understanding students' ideas, creating equitable STEM learning environments, assessing students' needs and providing high-quality instruction.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Elementary Education License, BA - Rural Partnership with Northeastern Junior College

Introduction

Please click here (https://ucdenver.acalogadmin.com/preview/preview_entity.php?catoid=28&ent_oid=1670&returnto=8210) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Elementary Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Northeastern Junior College (NJC), you will benefit from a highly supportive program with a strong rural focus. T-PREP at NJC students complete the first half of their program at NJC and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Elementary Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on NJC's campus in Sterling, Colorado; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in Northeastern Colorado, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at NJC or CU Denver.

Program Delivery

- This is an on-campus program in Sterling, Colorado on the Northeastern Junior College campus with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Elementary Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Elementary Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for **all** of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
EDHD 1930	Community Based Field Experience & Seminar	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
Students take the remaining courses at CU Denver		
Major Requirements Remaining		
Cultural Diversity Core Course		3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3

EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
Professional Year Courses		
A minimum grade of B- is required in all Professional Year Courses		
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4040	Planning for Learning	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
SCED 4004	Elementary Science Teaching	3
UEDU 4933	Internship & Lrng Comm III	6
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3
MTED 4003	Elementary Mathematics Teaching II	3
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**81-82**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

Elementary Education License, BA - Rural Partnership with Trinidad State College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Elementary Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Trinidad State College (TSC), you will benefit from a highly supportive program with a strong rural focus. T-PREP at TSC students complete the first half of their program at TSC and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Elementary Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Trinidad or Alamosa campus; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the Trinidad or Alamosa region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at TSC or CU Denver.

Program Delivery

- This is an on-campus program at Trinidad State, with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Elementary Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Elementary Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for **all** of the following major requirements:

Code	Title	Hours
Major Requirements		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
SPED 4300	Family, Professional, and Community Collaboration	3
CLDE 4020	Responsive Classroom Communities [1]	3

MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3
MTED 4002	Elementary Mathematics Teaching I	3
MTED 4003	Elementary Mathematics Teaching II	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**78**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Elementary Education with CLDE Added Endorsement, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with an Elementary license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their research in elementary education. They will provide you with a robust knowledge base and relevant learning experiences in children's thinking, culturally responsive education, and supporting English language learners, as well as technology as it relates to teaching children in grades kindergarten through sixth grade. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

We will prepare you to become a highly effective, innovative and compassionate elementary teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

A unique feature of this pathway is that the Culturally Linguistically Diverse Education, CLDE, endorsement is built into the program. Essentially, you will leave this program with both the Elementary Education License and CLDE Endorsement. This means you are prepared to teach K-6 and culturally & linguistically diverse students, making you highly employable and desirable to schools!

Students in this track have the opportunity to apply for the Bachelors to Masters Program (p. 904) (BAMA) during their junior year. The BAMA allows students to take 9 credits of their professional year program at the graduate level and apply them to one of 8 MA degrees in the SEHD.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Elementary Education Track.
2. Students must pass the appropriate Praxis Exam or demonstrate competency through another option as outlined by the Colorado Department of Education in order to be licensed.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Elementary Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
CLDE 3680	Spanish for Educators	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
CLDE 4020	Responsive Classroom Communities [1]	3
CLDE 4700	Social Studies for Multilingual Learners	3
EDFN 1000	Equality, Rights & Education	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
HDFR 2110	Child Ecology	3
or HDFR 3050	Children's Thinking and Assessment	
INTE 2000	Digital Teaching and Learning	3
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3

LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3
MTED 4002	Elementary Mathematics Teaching I	3
MTED 4003	Elementary Mathematics Teaching II	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
CLDE Endorsement		
Embedded Endorsement Courses (p. 911)		
General Electives		
Additional General Electives hours may be needed to reach the required 126 hours for the BA		
Total Hours		**84-85**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

CLDE Endorsement Courses

Embedded into the program is the coursework for an added endorsement in CLDE. In order to earn the CLDE endorsement, students must complete each of the courses below with a minimum grade of B-, as well as assemble a CLDE portfolio.

Code	Title	Hours
CLDE 2000	CLDE Foundations	3
CLDE 3680	Spanish for Educators	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
CLDE 4700	Social Studies for Multilingual Learners	3
EDHD 2930	Learning & Development Field Experience & Seminar	2-3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 4020	Responsive Classroom Communities	3
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Elementary Education, BA - Rural Partnership with Lamar Community College

Introduction

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Elementary Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Lamar Community College (LCC), you will benefit from a highly supportive program with a strong rural focus. T-PREP at LCC students complete the first half of their program at Lamar and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Elementary Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Lamar campus; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the Lamar region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at LCC or CU Denver.

Program Delivery

- This is an on-campus program in Lamar, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Elementary Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Elementary Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for **all** of the following major requirements:

Code	Title	Hours
Major Requirements		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
SPED 4300	Family, Professional, and Community Collaboration	3
CLDE 4020	Responsive Classroom Communities [1]	3
MTED 3040	Mathematics for Elementary Teachers [1]	3

SPED 4400	Universal Design for Learning (UDL)	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3
MTED 4002	Elementary Mathematics Teaching I	3
MTED 4003	Elementary Mathematics Teaching II	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**78**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Elementary Education, BA - Rural Partnership with Otero College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As an Elementary Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Otero College in La Junta, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Otero College students complete the first half of their program at Otero and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and an Elementary Education teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Otero campus in La Junta; (b) in boundary-less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the La Junta region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero College or CU Denver.

Program Delivery

- This is an on-campus program in La Junta with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Elementary Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Elementary Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for **all** of the following major requirements:

Code	Title	Hours
Major Requirements		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
SPED 4300	Family, Professional, and Community Collaboration	3

CLDE 4020	Responsive Classroom Communities [1]	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
LCRT 4001	Elementary Literacy Instruction and Assessment Part 2	3
MTED 4002	Elementary Mathematics Teaching I	3
MTED 4003	Elementary Mathematics Teaching II	3
SCED 4004	Elementary Science Teaching	3
UEDU 4040	Planning for Learning	3
UEDU 4050	Capstone: Planning, Instruction & Assessment	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**78**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Undergraduate Teacher Licensure

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

Education and Human Development (EDHD) Major Pathways:

There are **many** pathways that CU Denver undergraduates can take to become a licensed teacher in Colorado. The BA major in Education and Human Development (EDHD) is within the School of Education and Human Development (SEHD) and includes licensure in the following areas:

- Early Childhood Education (p. 900)
- Elementary Education (p. 910)
- Special Education Generalist (Ages 5-21) (p. 941)
- English Education (Grades 7-12) (p. 929)
- Mathematics (Grades 7-12) (p. 931)
- Middle School Math (Grades 6-8) (p. 925)
- General Science (Grades 7-12) (p. 933)
- Social Studies (Grades 7-12) (p. 939)

The following licensure areas are available through our T-PREP partnerships:

Otero College:

- Early Childhood Education License, BA (p. 896)
- Elementary Education, BA (p. 914)
- Middle School Math License, BA (p. 921)
- Secondary Science License, BA (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/school-education-human-development/education-human-development/secondary-science-license-ba-rural-partnership-otero-junior-college/)
- Special Education Generalist License, BA (p. 945)

Trinidad State College:

- Early Childhood Education License, BA (p. 898)
- Elementary Education License, BA (p. 908)
- Middle School Math License, BA (p. 923)
- Special Education Generalist License, BA (p. 949)

Northeastern Junior College:

- Early Childhood Education License, BA (p. 894)
- Elementary Education License, BA (p. 906)
- Middle School Math License, BA (p. 919)
- Secondary Science License, BA (p. 935)
- Special Education Generalist License, BA (p. 947)

Lamar Community College

- Early Childhood Education License, BA (p. 892)
- Elementary Education, BA (p. 912)
- Special Education Generalist License, BA (p. 943)

In the College of Liberal Arts and Sciences (CLAS) pathway, students major in CLAS and earn their secondary teaching license in the SEHD.

The Education and Human Development major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their research in elementary education. They will provide you with a robust knowledge base and relevant learning experiences in children's thinking, culturally responsive education, and supporting English language learners, as well as technology as it relates to teaching children in grades kindergarten through sixth grade. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships that are a part of our Professional Development Schools. All of the teacher licensure pathways prepare educators who are culturally affirming and responsive, collaborate closely with families and communities, and have the knowledge and skills to create engaging, relevant, and rigorous classroom communities where all students can learn, achieve and grow.

High Standards and Ongoing Assessment

The coursework and the internship experiences within each program have been created to align with the Colorado Teacher Quality Standards, as well as frameworks for culturally and linguistically responsive instruction and Universal Design for Learning. Students in all programs engage in a common set of learning opportunities and internship assessments. They also engage in Program Level Assessments at different stages of the program. Colorado mandates that all teacher education programs be "performance-based" in order to recommend candidates completing the program for licensure; thus all candidates must demonstrate proficiency in both the university-based coursework and their internships. Students must also pass state content exams prior to their final semester in the program.

Community College Articulation

CU Denver honors the community college articulation agreement in elementary and early childhood education to transfer the 60 designated semester hours from the community college to anyone admitted to the teacher licensure program. Students should make sure they are following the appropriate articulation agreement and should work with their SEHD or CLAS advisor early and often to ensure that all courses are transferred properly.

SEHD and T-PREP Pathways:

The CU Denver bachelor's degree with a major in Education and Human Development is a four-year, 126-credit-hour, interdisciplinary program with multiple licensure tracks. It focuses on engaging Colorado's rapidly diversifying student and family population and combines cutting-edge research with real classroom experiences.

The program is offered in a hybrid format with both in-class and online coursework that support the needs of talented students from all backgrounds, including nontraditional and underrepresented students.

Programs of Study

Additional information about the licensure tracks can be found on the SEHD website (https://education.ucdenver.edu/academics/undergraduate/).

Clinical Experiences in SEHD and T-PREP Pathways

Teacher candidates in the SEHD pathway work alongside community and P-12 partner educators from freshman to senior year. Students complete a community-based field experience block in their freshman year and

school-based field experience blocks in years 2 and 3. Each block is carefully coordinated with 1-2 other teacher education courses and a bi-weekly seminar to provide a fully integrated learning experience between theory and practice. In their final, professional year they are placed in a full year internship within the CU Denver Professional Development School Network comprised of over 20 urban schools across numerous districts in the Denver metro region. Through these internships, teacher education students live the life of a teacher for an entire academic year while enrolled in the program. The internships begin gradually with two days a week early on and increase over time to five days per week by the end of the final semester of the program. University courses are closely integrated with the sequence of clinical internship experiences providing teacher candidates with multiple opportunities to engage in the authentic work of teachers. Teacher candidates co-teach closely with practicing teachers in the school and gradually assume full responsibility for teaching by the end of the program. The schools are located in several Denver metropolitan districts serving large populations of low-income and/or culturally and linguistically diverse students, as well as a sizeable number of students for whom English is a second language and students with special needs. Each school is supported by a team of university and school-based educators who collaboratively support the development of each candidate through weekly coaching feedback and the facilitation of collaborative learning community seminars on-site at the school to integrate theory and practice.

Professional Year Admissions

After successfully completing all other Core, CLAS, major, and elective requirements, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)

Advising

Students in the SEHD have a dedicated team of staff and faculty committed to their success. This includes an academic advisor and teams of faculty who support the different licensure programs.

The SEHD accepts applications from incoming freshmen, current students at CU Denver, transfer students from community colleges or four-year institutions, individuals who are working as paraprofessionals, assistant teachers or developmental intervention assistants in early childhood centers or elementary schools and people who are interested in working in community-based organizations serving diverse families.

Email education@ucdenver.edu for more information. We encourage students to take advantage of the scholarships and grants that are available in this major.

CLAS Major Pathways:

The secondary undergraduate teacher education route at CU Denver is a joint effort between the College of Liberal Arts and Sciences and the School of Education & Human Development. Through this pathway, students earn a bachelor's degree through the College of Liberal Arts and Sciences and a teaching license through the School of Education & Human Development.

Please note: The admission into the School of Education & Human Development teacher education program for CLAS majors is a separate process from admission to the university or CLAS majors. See the SEHD website for application deadlines.

CLAS Undergraduate Teacher Education Pathways

The table below lists the CLAS bachelor's degrees and associated licensure areas available to CU Denver undergraduate students pursuing secondary education licensure.

CLAS Bachelor's Degree	Colorado Teaching License
BA in English Secondary	English Language Arts (grades 7-12)
BA in History Secondary	Social Studies (grades 7-12)
BA in Political Science Secondary	Social Studies (grades 7-12)
BA in Spanish	World Languages - Spanish (grades K-12)

Program Structure

The School of Education & Human Development collaborates closely with faculty and administration in the College of Liberal Arts & Sciences to ensure rigorous content preparation in areas of study aligned to the content knowledge necessary for licensed teachers. Students focus primarily on their major in CLAS during the first three years with the opportunity to engage in four early education courses and a semester-long internship in a partner school. If admitted to the final professional year of teacher education, students will then spend two semesters simultaneously enrolled in teacher education coursework specific to their licensure area and a sequence of year-long internships in one of the program's Professional Development Schools.

Clinical Experiences in CLAS Pathway

CLAS students engage in a full-semester early field experience block, spending one day a week in a metro area partner school in order to gain experience in a diverse classroom working with students with varying cultures, languages, and abilities. This field experience block also includes a coordinated teacher education course and a bi-weekly seminar. In their final, professional year students are placed in a full year internship within the CU Denver Professional Development School Network comprised of over 20 urban schools across numerous districts in the Denver metro region. Through these internships, teacher education students live the life of a teacher for an entire academic year while enrolled in the program. The internships begin gradually with two days a week early on and increase over time to five days per week by the end of the final semester of the program. University courses are closely integrated with the sequence of clinical internship experiences providing teacher candidates with multiple opportunities to engage in the authentic work of teachers. Teacher candidates co-teach closely with practicing teachers in the school and gradually assume full responsibility for teaching by the end of the program. The schools are located in several Denver metropolitan districts serving large populations of low-income and/or culturally and linguistically diverse students, as well as a sizeable number of students for whom English is a second language and students with special needs. Each school is supported by a team of university and school-based educators who collaboratively support the development of each candidate through weekly coaching feedback and the facilitation of collaborative learning community seminars on-site at the school to integrate theory and practice.

Professional Year Admissions

After successfully completing the first 3 years of the program, all students must apply for admission into the professional year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)

Advising

Undergraduate teacher candidates from CLAS will have a team of individuals who work with them throughout the completion of their bachelor's degree and teacher licensure. The following are the members of the advising team:

College of Liberal Arts and Science (CLAS) Education Advisor

The CLAS advisor will assist you upon entry to the university through graduation. The CLAS advisor will monitor your progress through the core curriculum, pre-licensure curriculum, eligibility requirements for the licensure program and transfer credits.

Major/Faculty Advisor

A major/faculty advisor designated within the academic department works with undergraduate teacher education students pursuing secondary licensure regarding specific requirements within their academic major (i.e., English, history, mathematics, Spanish, French, and political science). See the CLAS advisor for specific names and contact information.

School of Education and Human Development (SEHD) Advisor

During the Professional Year, all CLAS teacher candidates will be supported by an SEHD advisor to ensure licensure completion (Lawrence St. Center Bldg., 701; 303-315-6300). The Advisor in SEHD is also available early on to help with questions about program completion, taking the state content exams and other general questions.

CLAS Pathway Undergraduate Academic Planning Sheets

Developed in collaboration with the academic departments and SEHD teacher education program faculty, advisors will work with the teacher candidates on an academic planning sheet. There is little flexibility in the program course requirements as these requirements meet and exceed the Colorado Department of Education's teacher education professional and content standards.

Programs of Study

Due to the complex nature of state mandated influences on teacher preparation courses and consistently evaluating this program for students, please refer to the most current version of the teacher education program handbook for academic requirements for this program.

Middle School Math License, BA - Rural Partnership with Northeastern Junior College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Middle School Math teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving middle school student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program in Sterling, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Middle School Math Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Middle School Math Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following content and major requirements:

Code	Title	Hours
Content and Major Requirements		
MATH 2830	Introductory Statistics	3
MATH 1401	Calculus I	4
MATH 3000	Introduction to Abstract Mathematics	3
MATH 3195	Linear Algebra and Differential Equations	4
PHYS 2010	College Physics I	4
or PHYS 2311	General Physics I: Calculus-Based	
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	3
CLDE 4020	Responsive Classroom Communities	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3
MTED 3040	Mathematics for Elementary Teachers	3
MTED 4621	A World of (Different) Numbers: Quantity and Operation	3
MTED 4623	Geometrical Ways of Reasoning	3
STME 4001	Planning for Learning in Mathematics and Science [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar	2-3
EDHD 3930	Diverse Learners Field Experience & Seminar	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
MTED 4300	Curriculum and Methods for Teaching Mathematics	3

MTED 4301	Assessment and Equity in Mathematics Instruction	3
MTED 4622	Expanding Conceptions of Algebra	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**90-91**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Middle School Math License, BA - Rural Partnership with Otero College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Middle School Math teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving middle school student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Otero State, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Otero College students complete the first half of their program at Otero and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Middle School Math teaching license. You can also take and pass secondary math Praxis test to add the secondary math 7-12 endorsement to your MS Math License.

During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Otero College campus in La Junta; (b) in boundary-less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the La Junta region, which eliminates the need to travel to Denver. Finally, all advising, and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero or CU Denver.

Program Delivery

- This is an on-campus program on the Otero College campus in La Junta, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Middle School Math Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Middle School Math Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following content and major requirements:

Code	Title	Hours
Content and Major Requirements		
MATH 2830	Introductory Statistics	3
MATH 1401	Calculus I	4
MATH 3000	Introduction to Abstract Mathematics	3
MATH 3195	Linear Algebra and Differential Equations	4
PHYS 2010	College Physics I	4
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	1
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
CLDE 2000	CLDE Foundations [1]	3

EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	3
CLDE 4020	Responsive Classroom Communities	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3
MTED 3040	Mathematics for Elementary Teachers	3
MTED 4621	A World of (Different) Numbers: Quantity and Operation	3
MTED 4623	Geometrical Ways of Reasoning	3
STME 4001	Planning for Learning in Mathematics and Science [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar	2-3
EDHD 3930	Diverse Learners Field Experience & Seminar	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
MTED 4300	Curriculum and Methods for Teaching Mathematics	3
MTED 4301	Assessment and Equity in Mathematics Instruction	3
MTED 4622	Expanding Conceptions of Algebra	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**91-92**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Middle School Math License, BA - Rural Partnership with Trinidad State College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Middle School Math teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving middle school student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program at Trinidad State, with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Middle School Math Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Middle School Math Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following content and major requirements:

Code	Title	Hours
Content and Major Requirements		
MATH 2830	Introductory Statistics	3
MATH 1401	Calculus I	4
MATH 3000	Introduction to Abstract Mathematics	3
MATH 3195	Linear Algebra and Differential Equations	4
or MATH 2411	Calculus II	
PHYS 2010	College Physics I	4
or PHYS 2311	General Physics I: Calculus-Based	
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Students will take the remaining courses at CU Denver		
Major Courses		
CLDE 2000	CLDE Foundations	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3
MTED 3040	Mathematics for Elementary Teachers	3
MTED 4621	A World of (Different) Numbers: Quantity and Operation	3
MTED 4623	Geometrical Ways of Reasoning	3
STME 4001	Planning for Learning in Mathematics and Science [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
MTED 4300	Curriculum and Methods for Teaching Mathematics	3

MTED 4301	Assessment and Equity in Mathematics Instruction	3
MTED 4622	Expanding Conceptions of Algebra	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**90-91**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Middle School Mathematics License, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with a Middle School Mathematics license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in middle school mathematics education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for youth across multiple cultural contexts as it relates to teaching youth in grades 6 through 8. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The middle school mathematics program ensures that you will develop deep content knowledge important to become a successful mathematics teacher with courses in calculus, abstract math, statistics and more. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate middle mathematics teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

- Students must complete a minimum total of 126 semester hours for the EDHD Middle School Mathematics Education Track.
- Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
- A minimum of C- is required for all Math content courses.
- A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Middle School Mathematics Education requirements unless otherwise specified.
- Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
- Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
MTED 3040	Mathematics for Elementary Teachers [1]	3
CLDE 2000	CLDE Foundations [1]	3
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
MTED 4621	A World of (Different) Numbers: Quantity and Operation	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Content Courses		
A minimum grade of C- or higher is required in each course.		
MATH 2830	Introductory Statistics	3
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
or MATH 3191	Applied Linear Algebra	
MATH 3000	Introduction to Abstract Mathematics	3
Select one of the following:		3
MATH 4140	Introduction to Modern Algebra	
MATH 4110	Theory of Numbers	
MATH 4010	History of Mathematics	
MATH 4408	Applied Graph Theory	
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
MTED 4300	Curriculum and Methods for Teaching Mathematics	3
MTED 4301	Assessment and Equity in Mathematics Instruction	3
MTED 4622	Expanding Conceptions of Algebra	3
MTED 4623	Geometrical Ways of Reasoning	3
STME 4001	Planning for Learning in Mathematics and Science	3

STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional General Electives hours may be needed to reach the required 126 hours for the BA		
Total Hours		**87**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Education Licensure - CLAS Major Pathway

Introduction

Please click here (p. 876) to see the School of Education & Human Development information.

The following secondary undergraduate teacher education pathways at CU Denver are a joint effort between the College of Liberal Arts and Sciences (CLAS) and the School of Education & Human Development (SEHD). Through these pathways, students earn a bachelor's degree through CLAS and complete the requirements for teacher licensure through the SEHD.

The table below lists the CLAS bachelor's degrees and associated licensure areas available to CU Denver undergraduate students pursuing secondary education licensure.

CLAS Bachelor's Degree	Colorado Teaching License
BA in English Secondary	English Language Arts (grades 7-12)
BA in History Secondary	Social Studies (grades 7-12)
BA in Political Science Secondary	Social Studies (grades 7-12)
BA in Spanish	World Languages - Spanish (grades K-12)

Please note: Admission into the final year of the SEHD teacher education program, called the Professional Year, is a separate process from admission to the university or admission to CLAS. See the SEHD website for application deadlines.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 380) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

- Students must complete all requirements for their CLAS major.
- Application to the last year of the program, the Professional Year Residency, is required. After successfully completing all other Core, CLAS, major, and elective requirements, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see the SEHD website.)
- Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
- A minimum grade of B- is required for all education licensure courses.
- Transfer courses must be approved by faculty and/or advisor to apply to the education licensure courses.

Code	Title	Hours
Education Courses		
Take **all** of the following education courses before beginning the Professional Year (a minimum grade of B- is required in each course):		
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	3
CLDE 4020	Responsive Classroom Communities	3
EDHD 3930	Diverse Learners Field Experience & Seminar	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
LCRT 4100	Secondary Literacy Instruction and Assessment	3
UEDU 4040	Planning for Learning	3
Select two content methods courses, depending on licensure area:		6
English Language Arts (p. 927)		
Social Studies (p. 927)		
World Languages (p. 927)		
Capstone Course		**3**
UEDU 4052	English/LA & Social Studies Capstone: Secondary Ed	
Total Hours		**37**

Content Methods Courses by Licensure Area

(two required during Professional Year)

English Language Arts

Code	Title	Hours
LCRT 4200	Theory and Methods of Teaching Secondary English	3
LCRT 4201	Adolescent Literature	3

Social Studies

Code	Title	Hours
UEDU 4464	Methods of Teaching Social Studies	3
UEDU 4465	Methods of Teaching History	3

World Languages

Code	Title	Hours
Select two of the following:		6
MLNG 4690	Methods of Teaching Modern Languages	
CLDE 5030	Language Development of Multilingual Learners: Advanced	

CLDE 5070	Linguistic Analysis of English
CLDE 5140	Language, Culture & Educational Equity

Secondary English Language Arts License, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with an English Language Arts license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in English Language Arts education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for youth across multiple cultural contexts as it relates to teaching youth in grades 7 through 12. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The secondary English Language Arts program ensures that you will develop deep content knowledge across a number of disciplines important to become a successful English teacher with courses in writing, literature, literary criticism and more. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate secondary English teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary English Education Track.
2. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see the SEHD website.)
3. A minimum of C- is required for all English content courses.
4. A minimum GPA of 2.0, a grade of C or better, is required for all major courses applying to EDHD - Secondary English Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Content Courses		
A minimum grade C- or higher is required in each course.		
ENGL 2450	Introduction to Literature and Film	3
ENGL 2070	Grammar, Rhetoric and Style	3
ENGL 3001	Critical Writing	3
ENGL 3084	Digital Writing and Storytelling	3
ENGL 3160	Language Theory	3
ENGL 3795	Race and Ethnicity in American Literature	3
ENGL 1601	Storytelling: Literature, Film, and Television	3
or ENGL 2156	Introduction to Creative Writing	
ENGL 4601	Teaching English Language Learners: Theory and Practice	3
or ENGL 4190	Advanced Topics in Writing, Rhetoric, & Linguistics	
Select one of the following courses:		3
ENGL 3750	American Literature after the Civil War	
ENGL 4166	History of American Poetry	
ENGL 4230	The American Novel	
ENGL 4236	The American Short Story	
Select one of the following courses:		3
ENGL 4002	Major Authors: Before 1650	
ENGL 4200	Survey of the English Novel to 1900	
ENGL 4500	Medieval Literature	
ENGL 4520	English Renaissance	3
ENGL 4003	Major Authors: 1650-1900	
Select one of the following courses:		3
ENGL 4004	Major Authors: After 1900	

ENGL 4250	Twentieth Century Fiction	
ENGL 4460	Contemporary World Literature	
ENGL 4600	Modernism	
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
LCRT 4200	Theory and Methods of Teaching Secondary English	3
LCRT 4201	Adolescent Literature	3
LCRT 4720	Writing Development, Instruction and Assessment	3
UEDU 4040	Planning for Learning	3
UEDU 4052	English/LA & Social Studies Capstone: Secondary Ed	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional General Electives hours may be needed to reach the required 126 hours for the BA.		
Total Hours		**94**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Mathematics License, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with a Secondary Mathematics license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in secondary mathematics education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for youth across multiple cultural contexts as it relates to teaching youth in grades 7 through 12. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The secondary mathematics program ensures that you will develop deep content knowledge important to become a successful mathematics teacher with courses in calculus, abstract math, statistics and more. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate secondary mathematics teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary Mathematics Education Track.
2. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
3. A minimum of C- is required for all Math content courses.
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Secondary Mathematics Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
MTED 4622	Expanding Conceptions of Algebra	3
MTED 4623	Geometrical Ways of Reasoning	3
Content Courses		
A minimum grade of C- or higher is required in each course.		
CSCI 1410 & CSCI 1411	Fundamentals of Computing and Fundamentals of Computing Laboratory	3-4
or MATH 1376	Programming for Data Science	
MATH 1401	Calculus I	4
MATH 2411	Calculus II	4
MATH 2421	Calculus III	4
MATH 3000	Introduction to Abstract Mathematics	3
MATH 3191	Applied Linear Algebra	3
MATH 3382	Statistical Theory	3
MATH Courses		
Select two upper-division (3000-level or higher) courses from the following:		6
MATH 3210	Higher Geometry I	
MATH 3810	Introduction to Probability	
MATH 4010	History of Mathematics	
MATH 4110	Theory of Numbers	
MATH 4015	Capstone Course for Secondary Teachers	
MATH 4140	Introduction to Modern Algebra	
MATH 4310	Introduction to Real Analysis I	
MATH 4409	Applied Combinatorics	
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
MTED 4300	Curriculum and Methods for Teaching Mathematics	3

MTED 4301	Assessment and Equity in Mathematics Instruction	3
STME 4001	Planning for Learning in Mathematics and Science	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional General Electives may be needed to reach the required 126 hours for the BA		
Total Hours		**91-92**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Science License, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with a Secondary Science license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in secondary science education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for learners across multiple cultural contexts as it relates to teaching youth in grades 7 through 12. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The secondary science program ensures that you will develop deep content knowledge across a number of disciplines important to become a successful science teacher with courses in physics, biology, chemistry and Earth sciences. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate secondary science teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary Science Education Track.
2. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see the SEHD website.)
3. A minimum of C- is required for all Science content courses.
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Secondary Science Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
SCED 4340	Equity & Culture in Science Education: Local/ Global	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Content Courses		
A minimum grade of C- or higher is required in each course.		
MATH 1110	College Algebra (or higher)	4
BIOL 2010	Organisms to Ecosystems (Gen Bio)	3
BIOL 2020	Molecules to Cells (Gen Bio)	3
CHEM 2031	General Chemistry I	3
CHEM 2061	General Chemistry II	3
GEOL 1073	Physical Geology: Surface Processes	3
GEOL 1074	Physical Geology: Surface Processes Laboratory	1
PHYS 2010	College Physics I	4
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2020	College Physics II	4
or PHYS 2331	General Physics II: Calculus-Based	
Tracks		
Select all courses in one of the following tracks:		8-11
Biology Track (p. 934)		
Chemistry Track (p. 934)		
Environmental Sciences/Geology Track (p. 934)		
Physics Track (p.)		
Professional Year Courses		
A minimum grade of B- is required in each course.		
SPED 4400	Universal Design for Learning (UDL)	3
LCRT 4100	Secondary Literacy Instruction and Assessment	3
SCED 4400	Theory and Pedagogy of Science Learning	3
SCED 4401	Inquiry Science Pedagogy and Practices	3
STME 4001	Planning for Learning in Mathematics and Science	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2

UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional General Electives hours may be needed to reach the required 126 hours for the BA.		
Total Hours		**94-97**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better.

Biology Track

Code	Title	Hours
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
CHEM 2038	General Chemistry Laboratory I	1
CHEM 2068	General Chemistry Laboratory II	2
Select two additional upper-division (3000-level or above) BIOL courses (minimum of 6 credits)		6
Total Hours		**11**

Chemistry Track

Code	Title	Hours
CHEM 2038	General Chemistry Laboratory I	1
CHEM 2068	General Chemistry Laboratory II	2
Select two additional upper-division (3000-level or above) CHEM courses (minimum of 6 credits)		6
Total Hours		**9**

Environmental Sciences/Geology Track

Code	Title	Hours
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
or CHEM 2038	General Chemistry Laboratory I	
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
or CHEM 2068	General Chemistry Laboratory II	
Select two additional upper-division (3000-level or above) ENVS or GEOL courses (minimum of 6 credits)		6
Total Hours		**8**

Physics Track

Code	Title	Hours
PHYS 2321	Intro Experimental Phys Lab I	1
PHYS 2341	Intro Experimental Phys Lab II	1
Select two additional upper-division (3000-level or above) PHYS courses (minimum of 6 credits)		6
Total Hours		**8**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Science License, BA - Rural Partnership with Northeastern Junior College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

Program Delivery

- This is an on-campus program in Sterling, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary Science Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Secondary Science Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following content and major requirements:

Code	Title	Hours
Content and Major Requirements		
MATH 1110	College Algebra	4
BIOL 2010	Organisms to Ecosystems (Gen Bio)	3
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
BIOL 2020	Molecules to Cells (Gen Bio)	3
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
CHEM 2031	General Chemistry I	3
CHEM 2038	General Chemistry Laboratory I	1
GEOG 1202	Introduction to Physical Geography	3
PHYS 2010	College Physics I	4
PHYS 2321	Intro Experimental Phys Lab I	1
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Select one of the following:		
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	5
PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II	5
Students take the remaining courses at CU Denver		
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
SCED 4340	Equity & Culture in Science Education: Local/Global	3
SCED 4350	Issues and Trends in Science Education	3
STME 4001	Planning for Learning in Mathematics and Science [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
SCED 4400	Theory and Pedagogy of Science Learning	3
SCED 4401	Inquiry Science Pedagogy and Practices	3
SPED 4400	Universal Design for Learning (UDL)	3

STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**93-95**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Science License, BA - Rural Partnership with Otero College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Secondary Science teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Otero State, you will benefit from a highly supportive and program with a strong rural focus. T-PREP at Otero College students complete the first half of their program at Otero and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Secondary Science teaching license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Otero College campus; (b) in boundary-less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the La Junta region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero or CU Denver.

Program Delivery

- This is an on-campus program in La Junta with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary Science Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website (https://education.ucdenver.edu/academic-services/student-resources/undergraduate/).)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD - Secondary Science Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following content and major requirements:

Code	Title	Hours
Content and Major Requirements		
MATH 1110	College Algebra (or higher)	4
BIOL 2010	Organisms to Ecosystems (Gen Bio)	3
BIOL 2011	Organisms to Ecosystems Lab (Gen Bio)	1
BIOL 2020	Molecules to Cells (Gen Bio)	3
BIOL 2021	Molecules to Cells Lab (Gen Bio)	1
CHEM 2031	General Chemistry I	3
CHEM 2038	General Chemistry Laboratory I	1
GEOG 1202	Introduction to Physical Geography	3
PHYS 2010	College Physics I	4
PHYS 2321	Intro Experimental Phys Lab I	1
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Select one of the following:		4-5
CHEM 2061 & CHEM 2068	General Chemistry II and General Chemistry Laboratory II	
PHYS 2020 & PHYS 2341	College Physics II and Intro Experimental Phys Lab II	
Students take the remaining courses at CU Denver		
Major Courses		

CLDE 2000	CLDE Foundations [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
SCED 4340	Equity & Culture in Science Education: Local/ Global	3
SCED 4350	Issues and Trends in Science Education	3
STME 4001	Planning for Learning in Mathematics and Science [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2-3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
SCED 4400	Theory and Pedagogy of Science Learning	3
SCED 4401	Inquiry Science Pedagogy and Practices	3
SPED 4400	Universal Design for Learning (UDL)	3
STME 4051	STEM Capstone: Secondary Education	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6
General Electives		
Additional required courses from the community college pathway transfer in as electives to reach the required hours for the BA		
Total Hours		**88-90**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Secondary Social Studies License, BA

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development major with a Social Studies license focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally and internationally recognized for their teaching and research in Social Studies education. They will provide you with a robust knowledge base and relevant learning experiences in transforming deep content knowledge into learning experiences for youth across multiple cultural contexts as it relates to teaching youth in grades 7 through 12. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnering with schools to prepare teachers.

The secondary Social Studies program ensures that you will develop deep content knowledge across a number of disciplines important to become a successful Social Studies teacher with courses in history, political science, geography, economics and more. You will also be prepared with the methods and foundations coursework that will make you a highly effective, innovative and compassionate secondary Social Studies teacher skilled in improving student performance and reaching the needs of today's diverse learners in a variety of school settings. You will have the skills to be a teacher leader. CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Secondary Social Studies Education Track.
2. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
3. A minimum of C- is required for all content courses.
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD - Secondary Social Studies Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
CLDE 2000	CLDE Foundations [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 3050	Children's Thinking and Assessment	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
Content Courses		
A minimum grade of C- or higher is required in each course.		
HIST 1361	U.S. History to 1876	3
HIST 1362	U.S. History Since 1876	3
HIST 1026	World History Since 1500	3
HIST 3601	Colorado History	3
ECON 2012	Principles of Economics: Macroeconomics	3
ECON 2022	Principles of Economics: Microeconomics	3
PSYC 1000	Introduction to Psychology I	3
PSYC 1005	Introduction to Psychology II	3
PSCI 1101	American Political System	3
GEOG 1202	Introduction to Physical Geography	3
GEOG 1302	Introduction to Human Geography	3
ANTH 2102	Culture and the Human Experience	3
SOCY 1001	Understanding the Social World	3
Additional Upper-Division (3000-Level or Higher) Content Courses		
Select 6 credits (2 courses) of additional upper-division (3000-level or higher) content courses from any of the following prefixes: ANTH, ECON, ETST, GEOG, HIST, PSCI, PSYC, SOCY		6
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4100	Secondary Literacy Instruction and Assessment	3
UEDU 4040	Planning for Learning	3
UEDU 4052	English/LA & Social Studies Capstone: Secondary Ed	3
UEDU 4464	Methods of Teaching Social Studies	3
UEDU 4465	Methods of Teaching History	3
UEDU 4931	Internship & Lrng Comm I	2
UEDU 4932	Internship & Lrng Comm II	2
UEDU 4933	Internship & Lrng Comm III	6

General Electives	
Additional General Electives hours may be needed to reach the required 126 hours for the BA.	
Total Hours	**100**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Special Education, BA with added Elementary Education Endorsement

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The need for highly qualified, culturally and linguistically responsive special education teachers is on the rise in Colorado and the nation. According to the United States Bureau of Labor Statistics, it is estimated that nearly 280,000 special education teaching positions will need to be filled over the next decade (2016). The Special Education track of CU Denver's bachelor's degree in Education and Human Development prepares students to step into these roles and address the exceptional learning needs of individuals ages five to 21.

The Special Education program combines cutting-edge research with real classroom experiences. You will learn from faculty who are locally, nationally and internationally recognized for their research and innovation. They will provide you with critical knowledge and interventions to teach students with exceptional learning needs. You will be able to apply your new knowledge through frequent, powerful hands-on classroom experiences, and benefit from the advantage of our rich 20-year history of school and community partnerships.

The program is designed to enhance your ability to effectively support diverse, urban students with disabilities in K-12 public schools and alternative settings. Faculty members will foster your growth as a teacher and educational leader who promotes inclusion and equity for all. This program strives to help you:

- Gain a holistic understanding of special education
- Collaborate with schools and communities
- Engage in culturally and linguistically responsive teaching and leadership

A unique feature of this pathway is that you will be able to add the Colorado Department of Education's elementary endorsement to your credentials. Essentially, you'll leave this program with both the Special Education License and Elementary Education Endorsement through the Colorado Department of Education. This means you are prepared to teach Special Education AND K-6, making you highly employable and desirable to schools!

Students in this track have the opportunity to apply for the Bachelors to Masters Program (p. 904) (BAMA) during their junior year. The BAMA allows students to take 9 credits of their professional year program at the graduate level and apply them to one of 8 MA degrees in the SEHD.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn this 126 credit hour BA, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements. Students should declare their intent to pursue this degree as early as possible to avoid taking classes that not count toward their degree.

- CU Denver General Graduation Requirements (p. 126)
- CU Denver Core Curriculum (p. 122)
- School of Education and Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a total of 126 semester hours for the Education and Human Development, EDHD, - BA Special Education Track
2. Students must take the appropriate Praxis Test during their Junior year to complete licensure requirements.
3. An application process is required to continue into your last year/ Professional Year. After successfully completing the first three years of the program, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all major courses applying to EDHD BA Special Education.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Code	Title	Hours
Major Courses		
A grade of C or better is required for all courses.		
CLDE 2000	CLDE Foundations [1]	3
CLDE 4020	Responsive Classroom Communities [1]	3
EDFN 1000	Equality, Rights & Education	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
HDFR 2110	Child Ecology	3
or HDFR 3050	Children's Thinking and Assessment	
INTE 2000	Digital Teaching and Learning	3
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDHD 2930	Learning & Development Field Experience & Seminar [1]	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4400	Universal Design for Learning (UDL)	3

SPED 4740	Intersections of Literacy, Culture, & Exceptionality	3
or CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	
SPED 4780	Literacy Intervention for Exceptional Learners	3
Professional Year Courses		
A minimum grade of B- is required in each course.		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
MTED 4003	Elementary Mathematics Teaching II	3
SPED 4010	Intentional Interventions for Exceptional Learners	3
SPED 4140	Assessment: Inquiry, Instruction, & Intervention	3
SPED 4500	Transition and Secondary Methods in Special Education	3
UEDU 4040	Planning for Learning	3
SPED 4931	Internship & Learning Community I	2
SPED 4932	Internship & Learning Community II	2
SPED 4933	Internship & Learning Community III	6
General Electives		
Additional General Electives hours may be needed to reach the required 126 hours for the EDHD - BA Special Education.		
Total Hours		**85**

[1] Courses require a grade of B- or better

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Special Education Generalist License, BA - Rural Partnership with Lamar Community College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Special Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Lamar Community College, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Lamar Community College students complete the first half of their program at Lamar and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Special Education license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Lamar Community College campus (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the Lamar region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Lamar Community College or CU Denver.

Program Delivery

- This is an on-campus program in Lamar, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878)to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Special Education Generalist Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD – Special Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Major Courses Remaining		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
SPED 4740	Intersections of Literacy, Culture, & Exceptionality	3
SPED 4780	Literacy Intervention for Exceptional Learners	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	3
CLDE 4020	Responsive Classroom Communities [1]	3

MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year		
Take all of the following: (a minimum grade of B- is required in each course)		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
UEDU 4040	Planning for Learning	3
SPED 4010	Intentional Interventions for Exceptional Learners	3
SPED 4500	Transition and Secondary Methods in Special Education	3
SPED 4140	Assessment: Inquiry, Instruction, & Intervention	3
SPED 4931	Internship & Learning Community I	2
SPED 4932	Internship & Learning Community II	2
SPED 4933	Internship & Learning Community III	6
Total Hours		**81**

[1] Courses marked require a grade of B- or better; all other courses require a grade of C or better. Students who do no have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Special Education Generalist License, BA – Rural Partnership with Otero College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Special Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Otero State, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Otero College students complete the first half of their program at Otero and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Special Education license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the Otero College campus in La Junta; (b) in boundary-less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the La Junta region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero College or CU Denver.

Program Delivery

- This is an on-campus program in La Junta, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Special Education Generalist Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD – Special Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Major Courses Remaining		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
SPED 4740	Intersections of Literacy, Culture, & Exceptionality	3
SPED 4780	Literacy Intervention for Exceptional Learners	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	3
CLDE 4020	Responsive Classroom Communities [1]	3

MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year		
Take all of the following: (a minimum grade of B- is required in each course)		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
UEDU 4040	Planning for Learning	3
SPED 4010	Intentional Interventions for Exceptional Learners	3
SPED 4500	Transition and Secondary Methods in Special Education	3
SPED 4140	Assessment: Inquiry, Instruction, & Intervention	3
SPED 4931	Internship & Learning Community I	2
SPED 4932	Internship & Learning Community II	2
SPED 4933	Internship & Learning Community III	6
Total Hours		**81**

[1] Courses marked require a grade of B- or better; all other courses require a grade of C or better. Students who do no have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Special Education Generalist License, BA - Rural Partnership with Northeastern Junior College

Overview

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Special Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Northeastern Junior College (NJC) , you will benefit from a highly supportive program with a strong rural focus. T-PREP at NJC students complete the first half of their program at NJC and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Special Education license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on the NJC campus in Sterling; (b) in boundary less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in Northeastern Colorado, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Otero College or CU Denver.

Program Delivery

- This is an on-campus program in Sterling, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878)to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Special Education Generalist Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD – Special Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
EDFN 1000	Equality, Rights & Education	3
HDFR 2110	Child Ecology	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Major Courses Remaining		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
SPED 4740	Intersections of Literacy, Culture, & Exceptionality	3
SPED 4780	Literacy Intervention for Exceptional Learners	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	3
CLDE 4020	Responsive Classroom Communities [1]	3

MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year		
Take all of the following: (a minimum grade of B- is required in each course)		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
UEDU 4040	Planning for Learning	3
SPED 4010	Intentional Interventions for Exceptional Learners	3
SPED 4500	Transition and Secondary Methods in Special Education	3
SPED 4140	Assessment: Inquiry, Instruction, & Intervention	3
SPED 4931	Internship & Learning Community I	2
SPED 4932	Internship & Learning Community II	2
SPED 4933	Internship & Learning Community III	6
Total Hours		**81**

[1] Courses marked require a grade of B- or better; all other courses require a grade of C or better. Students who do no have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Special Education Generalist License, BA - Rural Partnership with Trinidad State College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Education and Human Development (EDHD) major focuses on engaging Colorado's rapidly diversifying student and family population. It combines cutting-edge research with real classroom experiences. You'll learn from innovative faculty members who are locally, nationally, and internationally recognized for their research in early childhood education. They will provide you with a robust knowledge base and relevant learning experiences focused on children's' thinking, culturally responsive education, and supporting English language learners. Further, you will learn how to use a range of technology tools you can use in your work with students. You'll engage in powerful classroom experiences and benefit from our rich 20-year history of partnerships with local school districts.

As a Special Education teaching candidate, we will prepare you to become a highly effective, innovative, and compassionate teacher skilled in improving student performance and meeting the needs of today's diverse learners in a variety of settings. When you graduate, you will have the skills it takes to be a teacher leader. In fact, CU Denver graduates often go on to acquire positions in educational leadership as their careers progress.

When you enroll as a student in The Partnership for Rural Educator Preparation (T-PREP) at Trinidad State College, you will benefit from a highly supportive program with a strong rural focus. T-PREP at Trinidad State students complete the first half of their program at Trinidad State and earn an Associate of Arts degree. Previous credits earned from other institutions are accepted. Then, you transfer as a T-PREP CU Denver student and take the remaining classes you need to earn a bachelor's degree and a Special Education license. During your time as a CU Denver student, you will enroll in classes that are (a) taught face-to-face in classes taught by CU Denver instructors on one of Trinidad State's campuses; (b) in boundary-less classrooms using video conferencing technology with other T-PREP students throughout Colorado; or (c) online. Further, all your fieldwork experiences take place in the Trinidad State region, which eliminates the need to travel to Denver. Finally, all advising and a wide range of supports are provided during all four years of your program, whether you are enrolled as a student at Trinidad State or CU Denver.

Program Delivery

- This is an on-campus program in Trinidad or Alamosa, Colorado with a variety of delivery options for many of our courses including hybrid, evening, weekend, and online courses.

Declaring This Major

- Click here (p. 878)to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 126 semester hours for the EDHD Special Education Generalist Education Track.
2. Students must pass the appropriate Praxis Exam prior to beginning their final semester of their Professional Year. It is recommended students complete the exam in the year prior to their Professional Year.
3. Application to the last year of the program, the Professional Year Residency is required. After successfully completing all other Core, major, and elective courses, all students must apply for admission into the Professional Year. Requirements for admission include a 3.0 GPA, positive letters of recommendation, successful evaluations of earlier clinical experiences, and a successful interview. (Students with a lower GPA may be considered under certain conditions. Please see SEHD website.)
4. A minimum GPA of 2.0, grade of C or better, is required for all courses applying to EDHD – Special Education requirements unless otherwise specified.
5. Students must complete and maintain a 3.0 minimum grade point average in Professional Year coursework to complete licensure requirements. Please see an advisor for more information on this requirement.
6. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Students will receive transfer credit for all of the following major requirements:

Code	Title	Hours
Major Requirements to Transfer		
EDHD 1930	Community Based Field Experience & Seminar [1]	3
HDFR 2110	Child Ecology	3
EDFN 1000	Equality, Rights & Education	3
INTE 2000	Digital Teaching and Learning	3
SPED 4030	Understanding (dis)Ability in Contemporary Classrooms [1]	3
Major Courses Remaining		
EDHD 2930	Learning & Development Field Experience & Seminar [1]	2
LCRT 3720	Introduction to Writing Development and Teaching	3
LCRT 4710	Primary Literacy for Diverse Learners: Pre K-3rd Grade	3
CLDE 2000	CLDE Foundations [1]	3
SPED 4740	Intersections of Literacy, Culture, & Exceptionality	3
SPED 4780	Literacy Intervention for Exceptional Learners	3
EDHD 3930	Diverse Learners Field Experience & Seminar [1]	3
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education [1]	3
SPED 4300	Family, Professional, and Community Collaboration	3
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	3
CLDE 4020	Responsive Classroom Communities [1]	3

MTED 3040	Mathematics for Elementary Teachers [1]	3
SPED 4400	Universal Design for Learning (UDL)	3
Professional Year Courses		
Take all of the following: (a minimum grade of B- is required in each course)		
LCRT 4000	Elementary Literacy Instruction and Assessment Part 1	3
MTED 4002	Elementary Mathematics Teaching I	3
UEDU 4040	Planning for Learning	3
SPED 4010	Intentional Interventions for Exceptional Learners	3
SPED 4500	Transition and Secondary Methods in Special Education	3
SPED 4140	Assessment: Inquiry, Instruction, & Intervention	3
SPED 4931	Internship & Learning Community I	2
SPED 4932	Internship & Learning Community II	2
SPED 4933	Internship & Learning Community III	6
Total Hours		**81**

[1] Courses require a grade of B- or better; all other courses require a grade of C or better. Students who do not have a B- or better in the specified courses must consult with their advisors about a plan to retake the course or complete additional work.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Culturally and Linguistically Diverse Education Minor

Introduction

Please click here (p. 876) to see School of Education and Human Development information.

The Culturally and Linguistically Diverse Education (CLDE) Minor is designed to provide students with an understanding of culturally and linguistically diverse students, families and communities, particularly in their relationship to public institutions. This minor is a powerful addition to majors in sociology, psychology, ethnic studies, gender studies, public health, communication, the humanities, and anyone in the field of education, as it provides professionals with a strong understanding of how to serve culturally and linguistically diverse students in school and community environments.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, and online courses.

Declaring This Minor

- Contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or email academicservices@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To complete a minor in CLDE, a students must complete 15 credit hours of CLDE and other related courses with a minimum grade of C (2.0).
2. Of those CLDE courses, at least nine credits must be completed at the University of Colorado Denver.
3. Transfer courses must be approved by faculty and/or advisor to apply to the minor.

Students will be able to create an emphasis that best suits their professional goals and needs. All CLDE minors must take a minimum of three CLDE courses from the list below. Students must select two additional courses either in CLDE or from other approved programs as listed below.

Minor Requirements

Code	Title	Hours
Select a minimum of three of the following:		9
CLDE 1000	Language, Identity, & Power: International Perspectives	
CLDE 2000	CLDE Foundations	
CLDE 3680	Spanish for Educators	
CLDE 3830	Culturally and Linguistically Responsive Teaching through STEM	
CLDE 3840	Independent Study in CLDE	
CLDE 4020	Responsive Classroom Communities	
CLDE 4700	Social Studies for Multilingual Learners	
Select two Approved Courses from outside CLDE of the following:		6
ECED 4650	Dual Language Learners Learning and Development	
EDFN 4000	Food Justice in City & Schools	
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	
HDFR 3250	Families in Global Perspectives	
HDFR 4040	Latino Families in School and Communities	
PSCI 1111	First Year Seminar (Immigration: The Struggle for Social Justice)	
SPED 4740	Intersections of Literacy, Culture, & Exceptionality	
SPAN 4020	Spanish Sociolinguistics	
SPAN 4040	Spanish Classroom Methods and Practice	
SPAN 4076	Spanish in Colorado	
SPAN 4080	Spanish in the United States	
Total Hours		**15**

Please contact the advisor for the complete course list.

Digital Media Design for Learning Minor

Introduction

Please click here (p. 876) to see the School of Education and Human Development information.

Using digital and social media platforms and technologies, you will design and produce accessible materials and learning experiences for people in school, organizational, and community settings. People with the Digital Media Design for Learning minor go on to be designers and producers of educational software in publishing and software companies; designers and producers of online training and training materials for organizations; designers and producers of educational exhibits in art and science museums; and designers and academic-technology consultants in K12 and college/university settings. When you select this completely online minor you become a part of an existing vibrant learning design community and professional network.

Program Delivery

- All of the courses for this minor are offered online.

Declaring this Minor

- Contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or email academicservices@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To complete a minor in Digital Media Design for Learning, a student will need to complete 15 credit hours of Digital Media Design for Learning courses with a minimum grade of C+ (2.3).
2. Of those Digital Media Design for Learning courses, at least 12 credits must be completed at the University of Colorado Denver.
3. A transfer course must be approved by faculty and/or advisor to apply to the minor.
4. Your minor program of study is developed in consultation with an academic advisor and requires you to have previously completed a minimum of 15 credits of undergraduate courses.

Minor Requirements

Code	Title	Hours
INTE 4100	Learning Experience Design	3
INTE 4340	Learning with Digital Stories	3
INTE 4680	Producing Media for Learning	3
INTE 4660	Developing Self-Paced Online Modules	3
INTE 4320	Games and Learning	3
or INTE 4000	Maker Studio	
Total Hours		**15**

Education Studies Minor

Introduction

Please click here (https://education.ucdenver.edu/) to see the School of Education and Human Development information.

The Education Studies Minor is a 15-credit undergraduate course of study that explores cognition and learning theory, teaching methods, development across the life span, and working with culturally and linguistically diverse learners.

The Education Studies Minor is useful across many disciplines and career paths. It is customized for students outside of the K-12 teaching pathway and they will be able to create an emphasis that best suits their professional goals and needs as the minor is designed to enhance many disciplinary or career paths where there may be an educational component.

Students who are becoming teachers and have Elementary, Early Childhood, Secondary or Special Education as a declared major are not eligible for the Education Studies Minor.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, and online courses.

Declaring This Minor

- Contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or email academicservices@ucdenver.edu.

General Requirements

The Education Studies Minor is combined with an existing major and degree. Students must satisfy all requirements as outlined below and those of the School of Education & Human Development applicable to the minor.

- Click here (https://catalog.ucdenver.edu/cu-denver/undergraduate/academic-policies-procedures/) for information about Academic Policies

Program Requirements

Students must complete 15 credits with a minimum grade of C or better. An overall minimum 2.0 is required for this minor. (Consult with advisor for timing and specific requirements of this minor.)

Code	Title	Hours
Foundations		
Select one of the following:		3
CLDE 1000	Language, Identity, & Power: International Perspectives (Core International Perspective course)	
EDFN 1000	Equality, Rights & Education (Core Social Science course)	
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	
Pedagogy		
Select two of the following:		6
CLDE 2000	CLDE Foundations	
CLDE 3680	Spanish for Educators	
ECED 4060	Working with Families, Professionals, and Communities	
ECED 4102	Developmentally Appropriate Curriculum Methods and Techniques	
HDFR 3050	Children's Thinking and Assessment	
INTE 2000	Digital Teaching and Learning	
INTE 2500	#Learning: Digital Spaces and Far Out Places (Core Social Science course)	
LCRT 2000	Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities (Core Humanities course)	
MTED 3040	Mathematics for Elementary Teachers	
SPED 4151	Slashing Stigmas: Promoting Positive Behaviors	
SPED 4300	Family, Professional, and Community Collaboration	
SPED 4400	Universal Design for Learning (UDL)	
Development		
Select one of the following:		3
HDFR 2110	Child Ecology	
HDFR 3020	Black and Latino Children in Families and Schools (Core Cultural Diversity course)	
SPSY 2200	Child and Adolescent Mental Health in Schools and Communities (Core Behavioral Science course)	
Elective		
Select an additional course from the lists above		3
Total Hours		**15**

Please contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or academicservices@ucdenver.edu for an appointment to discuss and plan your route through the Education Studies Minor.

Teacher Education Minor

Introduction

Please click here (https://education.ucdenver.edu/) to see School of Education and Human Development information.

The Teacher Education Minor is for undergraduate students who want to do a 4+1 program with the end goal of obtaining their teaching license. The minor will allow students to finish in 5 years (or less, depending on transfer credit) with a Bachelor of Arts or Science degree **and** a Masters program, as well as their Colorado Teaching License. Students will complete their chosen undergraduate degree with the Teacher Education minor and then complete the Masters of Teaching program in their chosen area in an additional year. It is important to note that the content of the major for your Bachelor's degree must match the teacher licensure area you want to pursue in the Master's degree (e.g., a science-related degree for teaching secondary science). We encourage you to meet with an undergraduate advisor in the School of Education & Human Development early on to ensure your major is aligned to the teaching license you are ultimately seeking.

Students who are becoming teachers and have Elementary, Early Childhood, Secondary or Special Education as a declared major are not eligible for the Teacher Education Minor.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, and online courses.

Declaring This Minor

- Contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or email academicservices@ucdenver.edu.

General Requirements

The Teacher Education Minor is combined with an existing non-SEHD major and degree. Students must satisfy all requirements as outlined below, and those of the School of Education & Human Development applicable to the minor.

In this 4+1 pathway, students will be required to

- Minor in Teacher Education with the required courses taken during their undergraduate program
- Apply into the Master of Arts in Teaching (https://education.ucdenver.edu/academics/graduate/teaching/#MAT) SEHD program during semester two of the minor
- Graduate with their undergraduate degree
- Complete the one-year Masters of Teaching program which will also make them eligible for the appropriate Colorado teaching license

Click here (p. 878) for information about the School of Education & Human Development Academic Policies.

Program Requirements

Students must complete the 15 credits below in the order established with a minimum grade B- or better. An overall minimum of 3.0 is required for this minor. (Consult with a SEHD advisor for timing and specific requirements of this minor.)

Please contact Undergraduate Advising in the School of Education & Human Development at 303-315-6300 or academicservices@ucdenver.edu for an appointment to discuss and plan your route through the Teacher Education Minor. The sequence of the courses required might vary depending on licensure.

Code	Title	Hours
Semester One (of the Minor) Courses:		*6*
EDFN 4010	Social Foundations and Cultural Diversity in Urban Education	
EDHD 2930	Learning & Development Field Experience & Seminar	
Semester Two (of the Minor) Course:		*3*
CLDE 5020	Responsive Classroom Communities	
Apply to the Masters of Teaching Program		
Semester Three (of the Minor): Choose One General Course Applicable to Licensure		*6*
Math, Science, Social Studies, English, Spanish, French, Special Education		
SPED 5030	Understanding (dis)Ability in Contemporary Classrooms	
Elementary		
LCRT 5710	Primary Literacy for Diverse Learners, Pre K-Grade 3	
AND Choose One Content Course Applicable to Licensure		
Math-		

MTED 5621	A World of (Different) Numbers: Quantity and Operation
MTED 5622	Expanding Conceptions of Algebra
MTED 5623	Geometrical Ways Of Reasoning
Science-	
SCED 5500	The Nature of Science
or SCED 5350	Issues and Trends in Science Education
Social Studies, English, Spanish, French-	
LCRT 5720	Writing Development, Instruction and Assessment
Elementary & Special Education-	
MTED 5400	Mathematics for Elementary Teachers
Total Hours	**15**

Human Development and Family Relations

Programs

- BS/MA 4+1 Program in Learning, Developmental, and Family Sciences: HDFR Concentration (p. 959)
- Human Development and Family Relations, BS (p. 960)
- Human Development and Family Relations, BS - Rural Partnership with Trinidad State College (p. 962)
- Human Development and Family Relations Minor (p. 964)

Human Development and Family Relations (HDFR)

HDFR 1000 - Global Human Development & Learning (3 Credits)
The purpose of this course is to examine the contextual nature of human development and learning at the global level. Emphasis is placed on the ecological development of individuals and learning and schooling within familial, cultural and educational contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

HDFR 1010 - Life Span Development in Ecological Settings (3 Credits)
This course is designed to introduce students to human development in ecological settings in particular family, school and community contexts as it occurs across the lifespan, including emotional, physical, and cognitive development, and emphasizes personal adjustment and achievement. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1030 - Who am I? Cultural Identity, Family, Diverse Soc Sys (3 Credits)
This course will use ecological systems theory perspectives as a foundation for understanding diverse Latino family dynamics, the intersection between Latino families, schools and community systems and other critical issues that Latino family systems face in the United States. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1050 - Trailblazing and Leading in Student Affairs: Student Affairs Leadership Dev (3 Credits)
This course provides a basic introduction to student affairs development practices and perspectives. The course provides an exploration of student affairs leadership identity and college student's leadership role in higher education environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1080 - Lifespan Issues in Family Violence (3 Credits)
This course examines family violence over the lifespan from family system and ecological perspectives. The course explores development, definitions, theory, correlates, and the occurrence of family violence over the lifespan; including practice, interventions, and policy within school and community contexts. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

HDFR 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

HDFR 2000 - Introduction to Family and Community Services (3 Credits)
Through ecological systems theories this course is designed to provide students with an introduction to family and community services within community and educational environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 2080 - Sex, Human Development and Family Systems (3 Credits)
Students will become familiar with human sexuality across the life span through behavioral science and ecological perspectives. Different aspects of sexuality including behavioral, biological, developmental and cultural will be examined Implications for working with individuals, families, and couples through a behavioral science context will be explored. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.

HDFR 2083 - Family and Personal Finance (3 Credits)
Students will become familiar with family and personal finances across the life span through the use of behavioral science and ecological perspectives. Different determinants of financial education including behavioral, developmental, and cultural will be examined within familial and individual contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

HDFR 2110 - Child Ecology (3 Credits)
This course focuses on the study of human growth and ecology from conception to adolescence. The emphasis is on the major theories of child growth, development, and ecology and the implications of classic and contemporary research in the community. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 2200 - Love, Family and Human Development (3 Credits)
This course provides an introduction to understanding love, intimate relationships, and family relations through an ecological systems perspective. The course provides an exploration of contemporary diverse family systems and their relationships across the life span. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

HDFR 3002 - Preparing to be a HDFR Professional (3 Credits)
In a seminar format, students will examine the ethics, value systems, and family policies and law affecting the Human Development and Family Relations profession. Students will utilize tools of professional preparation including goal-setting, building/refining resumes, and marketing skills and abilities. Restriction: Faculty or Academic Advisor approval is required to register. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3020 - Black and Latino Children in Families and Schools (3 Credits)
This course will use ecological systems theory perspectives as a foundation for students to develop their understanding about Black and Latino children as members of family systems, school systems and community systems within cultural contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

HDFR 3050 - Children's Thinking and Assessment (3 Credits)
A review of the psychology of children's thinking emphasizing developmental changes in modes of thought. Topics include conceptual behavior, problem solving, intelligence, creativity, humor, play, and an introduction to diagnostic, formative and summative assessment. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3100 - Adolescent Ecology (3 Credits)
Through ecological systems theories this course is designed to provide an understanding of adolescent ecological development and growth. Students will become familiar with adolescent development and growth from ecological perspectives in contexts of families, schools and communities. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3250 - Families in Global Perspectives (3 Credits)
Students will become familiar with family life across the world. Through ecological systems theories, this course is designed to provide an understanding of families in global perspectives. The impact of family policy and practices on international families will be examined. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

HDFR 3400 - Love, Couples and Family (3 Credits)
This course examines the development and maintenance of couple and family relationships through family therapy based concepts, family systems theories and other family theories. Topics include communication patterns, stress and conflict management, decision making and goal-setting within the family. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3500 - Introduction to Higher Education (3 Credits)
The course examines the history and structure of the institutions higher education in U.S. This course will also examine the relationship between institutions of higher education, students, faculty, administrators, and society at large. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3800 - Leadership for Racial Justice in School and Community Settings (3 Credits)
Students will learn about school- and community based leadership for racial justice in the U.S., considering the various purposes and techniques employed to pursue a more racially justice society. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall.

HDFR 4001 - Families and Parenting (3 Credits)
This course provides an advanced overview of theories and practices that impact culturally and linguistically diverse families and the parenting process through family systems and ecological perspectives. Specifically, there is a focus on the parent-child relationship through adolescence. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4002 - Family Life and Community Programming I (3 Credits)
This course teaches the principles, philosophies, models, and strategic methods of family life education for strengthening interpersonal and family relationships. Culturally competent students will learn about the development and implementation of effective educational programs and experiences within different community settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4003 - Leadership and Organizations (3 Credits)
This course provides an understanding of leadership theory and practice in community and educational environments. Students will learn about important aspects about leading diverse community and educational organizations including staff supervision, strategic planning, advancing the organization and maintaining integrity. Cross-listed with HDFR 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4004 - Family and Comm. Prog. II Grant Writing/Fundraising (3 Credits)
This course provides an understanding of developing skills on grant writing and fundraising as related to family, community and educational organizations/agencies. Students will learn about important aspects about grant writing, fundraising fundamentals and funding models for sustainability. Cross-listed with HDFR 5004. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4010 - Family and Cultural Diversity (3 Credits)
The examination of familial, gender, cultural, linguistic, social and other ecological factors on diverse family systems in the United States will be covered. An ecological theoretical analysis of minority family systems within a familial, educational and social justice perspective will be explored. Cross-listed with HDFR 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4040 - Latino Families in School and Communities (3 Credits)
This course will use ecological systems theory perspectives as a foundation for understanding diverse Latino family dynamics, the intersection between Latino families, schools and community systems and other critical issues that Latino family systems face in the United States. Cross-listed with HDFR 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4045 - Abuelos (Grandparents) Latino Families (3 Credits)
The course will focus on the social gerontology of Latinos families in later life. Specifically, the course will examine how ecological factors including familial, cultural, social, economic, health, cognitive and educational, impact the lives of Latino older person's in the contexts of family systems. Cross-listed with HDFR 5045. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4050 - Foundations of Student Affairs (3 Credits)
This course examines theories of college student development including student learning and growth during the postsecondary years. This course will provide an introduction to psychosocial, cognitive, moral, and social identity development theories used to explain college student development. Cross-listed with COUN 5050. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HDFR 4075 - Family Policy & Law (3 Credits)
In this course students will identify, develop, implement and evaluate social policies and laws that effect the well-being of families. Through a family systems perspective, students will examine the law, social services, education, the economy, religion, and politics impact families. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4080 - Global Family Resource Management (3 Credits)
This course examines the allocation of family resources (social, financial and material assets), the influence of various ecological systems, the effect on family functioning and goal-setting from a global perspective. Practical applications for Family Relations professionals are included. Cross-listed with HDFR 5080. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4090 - Helping Profession Skills in HDFR (3 Credits)
This course is designed to provide an overview of essential skills required in a variety of helping situations and settings. Course content includes the development of accurate listening, empathy, reflection, and inquiry skills. Implications for working with individuals, families, and couples will be examined. Cross-listed with HDFR 5090. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4130 - College Student Development (3 Credits)
This course examines theories of college student development including student learning and growth during the postsecondary years. This course will provide an introduction to psychosocial, cognitive, moral, and social identity development theories used to explain college student development. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HDFR 4200 - Adult Ecology (3 Credits)
The emphasis is on the major theories of adult ecology and growth and the implications of classic and contemporary research in the community. Specifically, biological, psychological, psychosocial, cognitive, and cross-cultural theories will be explored. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4260 - Family Systems and Social Justice (3 Credits)
Relying on ecological systems theories, this course will introduce students to families and family systems. Students will investigate how families experience (in)justice in the areas of access to education, community services, and employment. Cross-listed with HDFR 5260. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4300 - Families in Later Life (3 Credits)
Students will become familiar with the importance of families in later life. Through family systems and ecological systems theories, this course is designed to provide an understanding of the importance of family relationships and implications for practice, research, and policy. Cross-listed with HDFR 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4500 - Diversity, Inclusion, Social Justice in Higher Education (3 Credits)
An examination of society, media, and public and educational policy and their impact on higher education access and persistence for marginalized groups. Students are called to consider how student affairs professionals might promote social justice for marginalized student groups. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4850 - Family Systems Therapy, Religion and Spirituality (3 Credits)
This course examines how the intersection between different religious and spiritual frameworks affects family systems. A strengths-based ecological perspective, family therapy theories and family systems theories will be used to understand religious and spiritual frameworks in working with families in schools and communities. Cross-listed with RLST 4850. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4860 - Trauma Informed Care for Diverse Populations and Co-occurring Disorders (3 Credits)
Trauma Informed Care is a treatment framework that involves understanding, recognizing and responding to effects of all types of trauma. The clinical shift is from “what’s wrong with you” to “what happened to you.” The need to address trauma is increasingly viewed as an important component of effective behavioral health service delivery. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4888 - LGBTQ Family Systems (3 Credits)
This course examines diverse Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) family systems through ecological systems perspectives and family theories. The course provides an exploration of contemporary research, policy and practice as it pertains to LGBTQ families. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4930 - Human Development and Family Relations Internship (1-5 Credits)
This course provides supervised practicum/field experience to Human Development and Family Relations students. Students will apply theory and evidence-based knowledge in professional situations, enhancing the development of their professional identities and career goals by working within and evaluating community-based organizations. Prereq: HDFR 3002. Repeatable. Max Hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Prereq: HDFR 3002

BS/MA 4+1 Program in Learning, Developmental, and Family Sciences: HDFR Concentration

Introduction

Students in the BS/MA 4+1 Program in Education and Human Development: HDFR Concentration will have a pathway to **complete a BS and MA in Learning Development and Family Sciences HDFR in five years.** LDFS HDFR students who pursue this BS/MA (4+1) option will likely have opportunities for accelerated opportunities to work and lead in community-based organizations with culturally and diverse families in community and educational settings.

LDFS HDFR undergraduate students may apply into the BS/MA program after completing 60 or more credits. A holistic admission process (following a comprehensive review of all admission materials) will be used including GPA, two letters of recommendation, demonstrate leadership experiences and an interview with HDFR faculty. A minimum of an overall cumulative GPA of at least 3.0 and a major GPA of 3.3 or better will be required and they have a faculty mentor who will strongly support his or her application to the program.

Program Delivery

- This is an on-campus program with some online options.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

HDFR students who are granted admission to the BS/MA (4+1) program and effectively subsequently admitted to the LDFS MA: HDFR concentration can substitute two undergraduate 4000 level HDFR major courses (6 credits) for two graduate level HDFR courses (6 credits) approved by HDFR faculty or HDFR advisor.

The content knowledge of the two courses substituted in the undergraduate program is addressed in greater depth and placed in larger scholarly context in the corresponding graduate courses. The student needs to earn a grade of B (3.0) or better in the two corresponding HDFR graduate courses.

Course Requirements

MA program in Learning, Developmental and Family Sciences: Human Development and Family Relations (HDFR) concentration

Code	Title	Hours
LDFS 6200	Human Development Over the Life Span	3
RSEM 5120	Introduction to Research Methods	3
LDFS 5110	Human Learning	3
HDFR 6000	Family Theories	3
RSEM 5100	Basic Statistics	3
HDFR/SEHD Electives:Professional Personalized Master's Electives (Completed at MA level)		6
BSMA Courses (Completed at Undergraduate Level)		6
LDFS 6950	Culminating Capstone Experience	3
Total Hours		**30**

Human Development and Family Relations, BS

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Human Development and Family Relations (HDFR) Bachelor of Science program prepares students to effectively serve individuals and families in a wide variety of environments. HDFR is committed to a curriculum rich in family diversity and social justice. This 120 credit-hour interdisciplinary program explores family systems and the ecological development of individuals across their life span. The HDFR program leads to certification in the field.

Program Delivery

- This is an on-campus or online program with a variety of delivery options for many of our courses including hybrid, evening, and online courses.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

HDFR Policies

Transfer Credit

HDFR is a transfer friendly major. HDFR will accept between 18- 27 transfer elective credits that must be approved by the Registrar and the HDFR Academic Advisor. If a student is transferring from a Non-HDFR/HDFS major they are allowed to petition for an additional 6 credits. All transfer credits must be approved by the HDFR Academic Advisor and HDFR Program Chair. If a student is transferring from a HDFR/HDFS program from another university, they can petition for additional credits to count towards the HDFR major credit. The credits must be a match to be considered for official transfer.

HDFR Passing-Grade Requirements

HDFR courses (for majors/minors) must be passed with a C. C- does not constitute a passing grade; C- may be approved if overall GPA is 2.0 or above with HDFR Program Chair review and approval (an exception may be made in only one course, and this is handled on a case-by-case basis).

HDFR Professional Internship Contact Hours Update

Students are required to complete 200 hours on-site. This is in addition to completing the HDFR 4930 Human Development and Family Relations Internship course (equivalent: 45 contact hours)

- On-Site Hours can be completed in 1 semester, 2 semesters or 1 semester and a summer session. Students can register for variable credits from 1-5 for a total of 5 credits.
  Contact Hours:

Credit	On-site Hours
1.0	40
2.0	80
3.0	120
4.0	160
5.0	200

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 120 semester hours for the Human Development and Family Relations BS.
2. A minimum GPA of 2.0, C or better grade, is required for all courses applying to Human Development and Family Relations major requirements.
3. Courses can be "double-dipped" - i.e., used to satisfy both a general education requirement and a major course. If double-dipping courses, additional courses in the electives will have to be taken to get to the 120 major required credits.
4. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Major Requirements

Take **all** of the following Human Development and Family Relations major courses with a grade of C or better.

Code	Title	Hours
Required Courses		
HDFR 1010	Life Span Development in Ecological Settings	3
HDFR 2000	Introduction to Family and Community Services	3
HDFR 2080	Sex, Human Development and Family Systems	3
HDFR 2200	Love, Family and Human Development	3
HDFR 3002	Preparing to be a HDFR Professional	3
HDFR 3020	Black and Latino Children in Families and Schools	3
HDFR 3250	Families in Global Perspectives	3
HDFR 3400	Love, Couples and Family	3
HDFR 4001	Families and Parenting	3
HDFR 4002	Family Life and Community Programming I	3
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4010	Family and Cultural Diversity	3
HDFR 4075	Family Policy & Law	3
HDFR 4080	Global Family Resource Management	3
HDFR 4260	Family Systems and Social Justice	3
HDFR 4930	Human Development and Family Relations Internship	5
Research & Statistics for HDFR		
A grade of C or better is required:		
RSEM 4100	Research and Statistics in Families and Human Development	3
RSEM 4120	Introduction to Research Methods	3
HDFR Family Diversity		
Select one of the following (a grade of C or better is required):		3

HDFR 1030	Who am I? Cultural Identity, Family, Diverse Soc Sys	
HDFR 1080	Lifespan Issues in Family Violence	
HDFR 3800	Leadership for Racial Justice in School and Community Settings	
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4888	LGBTQ Family Systems	
HDFR 4850	Family Systems Therapy, Religion and Spirituality	
HDFR Human Development and Learning		
Select one of the following (a grade of C or better is required):		3
HDFR 1000	Global Human Development & Learning	
HDFR 2110	Child Ecology	
HDFR 3050	Children's Thinking and Assessment	
HDFR 3100	Adolescent Ecology	
HDFR 4200	Adult Ecology	
HDFR 4300	Families in Later Life	
HDFR Elective		
Select one of the following (a grade of C or better is required):		3
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4090	Helping Profession Skills in HDFR	
HDFR 4300	Families in Later Life	
HDFR 4850	Family Systems Therapy, Religion and Spirituality	
HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	
HDFR 4888	LGBTQ Family Systems	
Electives [1]		
HDFR concentration areas:		
Pre-Individual, Couple, and Family Therapy/Counseling (p. 961)		
Leadership and Community-based Organizations (p. 961)		
Higher Education Environments (Pre-Higher Education and Student Affairs) (p. 961)		
Educational Foundations and Social Justice (p. 961)		
Early Childhood Development (p. 961)		
Bilingual (Spanish) Family and Community Services (p. 961)		
Family Gerontology (p. 961)		
Total Hours		**68**

[1] In consultation with the HDFR advisor, students may choose courses to complete a minor, certificate and/or HDFR concentration area as long as it supports their career goals. 18 credits of electives are required. If double dipping (using a required HDFR major course to fulfill a general education requirement) more credits will be needed. Transfer students, depending on transferred courses, might not need any electives.

Pre-Individual, Couple and Family Therapy/Counseling

Provides an introduction to clinical helping professions through systems and strengths therapy perspectives, and includes English and bilingual tracks.

Leadership and Community-based Organizations

Provides a comprehensive understanding and preparation for students to work in and lead community-based organizations including secular, faith-based, for-profit, nonprofit, schoolbased, state, federal and international organizations.

Higher Education Environments (Pre-Higher Education and Student Affairs)

Provides students with an introduction to higher education and student affairs administration and possible careers at various universities, community colleges and liberal arts colleges.

Educational Foundations and Social Justice

Provides students with a foundation to understand justice within familial, educational and community settings. This concentration works well with the previously listed concentrations and is also offered in an English and a bilingual track.

Early Childhood Development

Bilingual (Spanish) Family and Community Services

Provides students with the linguistic ability to work with Spanish-speaking families and communities. Courses will be delivered in 70 percent Spanish and 30 percent English. Students in this concentration will also be able to complete any of the other concentrations in the program.

Family Gerontology

Provides students with an ecological understanding of culturally and linguistically diverse families in later life. This concentration provides students with insight about individuals' age in families and the community. It also exposes students to promising practices for better serving older adults.

See advisor for courses to take in the concentration areas and for more information.

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Human Development and Family Relations, BS - Rural Partnership with Trinidad State College

Introduction

Please click here (p. 876) to see School of Education & Human Development information.

The Human Development and Family Relations (HDFR) Bachelor of Science program prepares students to effectively serve individuals and families in a wide variety of environments. HDFR is committed to a curriculum rich in family diversity and social justice. This 120 credit-hour interdisciplinary program explores family systems and the ecological development of individuals across their life span. The HDFR program leads to certification in the field.

This program is a rural partnership with Trinidad State College (TSC) in Trinidad, Colorado. Students complete the first two years of the program at TSC in an Associate of Applied Science degree in Human Services and then transfer to CU Denver to complete their final two years in online HDFR coursework for the BS in HDFR degree. Advising is provided during all four years of the program, whether students are TSC or CU Denver students.

Program Delivery

- The courses in the first two years of the program are offered on campus in Trinidad at TSC and the last two years of the BS degree are offered in an online format. High touch distance and local advising support is offered to students in the program.

Declaring This Major

- Click here (p. 878) to go to information about declaring a major.

HDFR Policies

Transfer Credit

HDFR is a transfer-friendly major. HDFR will accept between 18-27 transfer elective credits that must be approved by the Registrar and the HDFR Academic Advisor. If a student is transferring from a Non-HDFR/HDFS major they are allowed to petition for an additional 6 credits. All transfer credits must be approved by the HDFR Academic Advisor and HDFR Program Chair. If a student is transferring from an HDFR/HDFS program from another university, they can petition for additional credits to count towards the HDFR major credit. The credits must be a match to be considered for official transfer.

HDFR Passing-Grade Requirements

HDFR courses (for majors/minors) must be passed with a C. C- does not constitute a passing grade; C- may be approved if overall GPA is 2.0 or above with HDFR Program Chair review and approval (an exception may be made in only one course, and this is handled on a case-by-case basis).

HDFR Professional Internship Contact Hours, HDFR 4930

Students are required to complete 200 hours on-site. This is in addition to completing the HDFR 4930 Human Development and Family Relations Internship course (equivalent: 45 contact hours)

- On-Site Hours can be completed in 1 semester, 2 semesters or 1 semester and a summer session. Students can register for variable credits from 1-5 for a total of 5 credits.

Contact Hours:

Credit	On-site Hours
1.0	40
2.0	80
3.0	120
4.0	160
5.0	200

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Education & Human Development Graduation Requirements (p. 877)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete a minimum total of 120 semester hours for the Human Development and Family Relations BS.
2. A minimum GPA of 2.0, C or better grade, is required for all courses applying to Human Development and Family Relations major requirements.
3. Courses can be "double dipped" - i.e., used to satisfy both a general education requirement and a major course. If double dipping courses, additional courses will have to be taken to get to the 120 major required credits.
4. Transfer courses must be approved by faculty and/or advisor to apply to the major.

Take all courses with a grade of C or better.

Code	Title	Hours
Major Courses		
HDFR 1010	Life Span Development in Ecological Settings	3
HDFR 2000	Introduction to Family and Community Services	3
HDFR 2080	Sex, Human Development and Family Systems	3
HDFR 2200	Love, Family and Human Development	3
HDFR 3002	Preparing to be a HDFR Professional	3
HDFR 3020	Black and Latino Children in Families and Schools	3
HDFR 3250	Families in Global Perspectives	3
HDFR 3400	Love, Couples and Family	3
HDFR 4001	Families and Parenting	3
HDFR 4002	Family Life and Community Programming I	3
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4010	Family and Cultural Diversity	3
HDFR 4075	Family Policy & Law	3
HDFR 4080	Global Family Resource Management	3
HDFR 4260	Family Systems and Social Justice	3

HDFR 4930	Human Development and Family Relations Internship	5
Research & Statistics for HDFR		
A grade of C or better is required:		
RSEM 4100	Research and Statistics in Families and Human Development	3
RSEM 4120	Introduction to Research Methods	3
HDFR Family Diversity		
Select one of the following (a grade of C or better is required):		3
HDFR 1030	Who am I? Cultural Identity, Family, Diverse Soc Sys	
HDFR 1080	Lifespan Issues in Family Violence	
HDFR 3800	Leadership for Racial Justice in School and Community Settings	
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4850	Family Systems Therapy, Religion and Spirituality	
HDFR Human Development and Learning		
Select one of the following (a grade of C or better is required):		3
HDFR 1000	Global Human Development & Learning	
HDFR 2110	Child Ecology	
HDFR 3050	Children's Thinking and Assessment	
HDFR 3100	Adolescent Ecology	
HDFR 4200	Adult Ecology	
HDFR 4300	Families in Later Life	
HDFR Elective		
Select one of the following (a grade of C or better is required):		3
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4090	Helping Profession Skills in HDFR	
HDFR 4300	Families in Later Life	
HDFR 4850	Family Systems Therapy, Religion and Spirituality	
HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	
HDFR 4888	LGBTQ Family Systems	
Total Hours		**68**

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/sehd/).

Human Development and Family Relations Minor

Introduction

Please click here (p. 876) to see School of Education and Human Development information.

The Human Development and Family Relations (HDFR) minor prepares students to effectively serve and understand culturally and linguistically diverse family systems. For students who are interested in becoming family therapist, work in community based organizations or work as a university or college advisor/administrator this minor will provide excellent foundational courses in these areas. It also provides students with a family systems and ecological systems theories foundation of families and how they interact with community and educational contexts.

Program Delivery

- This is an on-campus program with a variety of delivery options for many of our courses including hybrid, evening, weekend and online courses.

Declaring This Minor

- If you are currently a CU Denver student click here (https://education.ucdenver.edu/academics/undergraduate/minors/detail/Human-Development-and-Family-Relations-Minor/) to declare the minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. To earn a minor, students must complete 15 approved credit hours specific to the minor, maintain good academic standing in the courses, complete their undergraduate degree concurrently, and satisfy all requirements in each of the areas below, in addition to their individual major requirements.
2. HDFR minor courses require a minimum grade of C (2.0).
3. 9 credits of HDFR minor courses must be completed at the University of Colorado Denver.
4. Transfer courses must be approved by faculty and/or advisor to apply to the minor.

Minor Requirements

Required Course

Code	Title	Hours
HDFR 2000	Introduction to Family and Community Services	3
or HDFR 2200	Love, Family and Human Development	
Total Hours		**3**

Other Required Courses

Code	Title	Hours
Select four courses from the following: [1]		12
HDFR 1000	Global Human Development & Learning	
HDFR 1010	Life Span Development in Ecological Settings	
HDFR 1030	Who am I? Cultural Identity, Family, Diverse Soc Sys	
HDFR 1050	Trailblazing and Leading in Student Affairs: Student Affairs Leadership Dev	
HDFR 1080	Lifespan Issues in Family Violence	
HDFR 1111	First Year Seminar	
HDFR 2080	Sex, Human Development and Family Systems	
HDFR 2110	Child Ecology	
HDFR 2200	Love, Family and Human Development	
HDFR 3020	Black and Latino Children in Families and Schools	
HDFR 3050	Children's Thinking and Assessment	
HDFR 3100	Adolescent Ecology	
HDFR 3250	Families in Global Perspectives	
HDFR 3400	Love, Couples and Family	
HDFR 3500	Introduction to Higher Education	
HDFR 3800	Leadership for Racial Justice in School and Community Settings	
HDFR 4001	Families and Parenting	
HDFR 4002	Family Life and Community Programming I	
HDFR 4003	Leadership and Organizations	
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	
HDFR 4010	Family and Cultural Diversity	
HDFR 4040	Latino Families in School and Communities	
HDFR 4045	Abuelos (Grandparents) Latino Families	
HDFR 4050	Foundations of Student Affairs	
HDFR 4075	Family Policy & Law	
HDFR 4080	Global Family Resource Management	
HDFR 4090	Helping Profession Skills in HDFR	
HDFR 4130	College Student Development	
HDFR 4200	Adult Ecology	
HDFR 4260	Family Systems and Social Justice	
HDFR 4300	Families in Later Life	
HDFR 4500	Diversity, Inclusion, Social Justice in Higher Education	
HDFR 4850	Family Systems Therapy, Religion and Spirituality	
HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	
ECED 4030	Nutrition, Health, and Safety	
ECED 4070	Development and Education of Infant and Toddlers	
EDFN 1000	Equality, Rights & Education	
EDFN 3000	Undocumented Mexican Immigration	
EDFN 4000	Food Justice in City & Schools	
EDHD 2050	Current Topics in Education and Human Development	
EDHD 2840	Independent Study in Education & Human Development	

EDHD 2910	Service Learning in Education and Human Development	
EDHD 4050	Special Topics in Education and Human Development	
LCRT 2000	Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities	
LCRT 3815	Once Upon a Time: Family Literacies in Culturally Diverse Communities	
Total Hours		**12**

[1] Students are encouraged to select courses that meet their interest and/or career aspirations.

School of Public Affairs

Leadership

Dean

Paul Teske, Dean and Distinguished CU Professor

Associate Deans

Christine Martell, Associate Dean for Faculty Affairs
Kelly Hupfeld, Associate Dean for Student Affairs

Assistant Dean

Kathy Kilpatrick, Assistant Dean of Administration and Finance

Contacts

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Prospective Student Inquiries

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Undergraduate Student Advising

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Overview

Lead. Solve. Change. The nationally-ranked School of Public Affairs at the University of Colorado Denver prepares leaders for government, nonprofit, and criminal justice professions. Driven by a public service mission, our students are committed to solving pressing public problems and improving their communities for the better. School of Public Affairs graduates work as legislators, policy analysts, nonprofit leaders, law enforcement professionals, local government managers, community advocates, university faculty and administrators, and in many other fields and professions, linked by the common goal of contributing to the greater good.

The School of Public Affairs offers degree programs with optional concentrations, as well as minors and undergraduate and graduate certificate programs. All of our programs are committed to developing the rigorous and ethical thinking necessary for public service professionals. Courses integrate theoretical knowledge with the real-world application of important skills, and students frequently have the opportunity to work on behalf of government agencies and nonprofit organizations. Programs are offered in a variety of formats to accommodate both full-time students and working professionals, all taught by the same highly-regarded faculty. The size of the school means that all students can receive individualized advising and attention, and students and alumni benefit from in-house career and alumni services.

Highlights

The MPA program is accredited by the Network of Schools of Public Policy, Affairs, and Administration (NASPAA), the authoritative accrediting body in the field of public policy, affairs and administration.

US News & World Report 2023 Rankings in the Nation:

- #29 – Best Graduate Public Affairs Schools
  - #10 – Environmental Policy and Management
  - #16 – Nonprofit Management
  - #19 – Public Finance and Budgeting
  - #21 – Public Management and Leadership
  - #25 – Local Government
- #21 - Online Master of Criminal Justice

Course List for School of Public Affairs

Click here (p. 971) for a complete course list for the School of Public Affairs.

School of Public Affairs Admissions Information

Applicants whose cumulative GPA and test scores meet or exceed the middle 50 percent range are considered strong candidates for admission to the School of Public Affairs.

Application Deadlines

Visit the Admissions Office's website (https://www.ucdenver.edu/admissions/how-to-apply/) for the undergraduate application deadlines.

For a list of graduate programs and graduate information, please refer to the Graduate (http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-public-affairs/#departmentstext) Catalog.

School of Public Affairs Programs

- Public Affairs (p. 971)
  - Criminal Justice, BA (p. 981)
  - Criminal Justice - Law Enforcement Concentration, BA (p. 983)
  - Criminal Justice - Victims and Victim Services Concentration, BA (p. 984)
  - Criminal Justice, BA/MCJ (p. 986)
  - Public Administration, BA (p. 987)
  - Public Administration - Nonprofit Management Concentration, BA (p. 989)
  - Public Administration, BA/MPA (p. 990)
  - Public Administration, BA/Master of Public Policy (p. 991)
  - Criminal Justice Minor (p. 992)
  - Law Enforcement Minor (p. 993)
  - Nonprofit Management Minor (p. 994)
  - Public Administration Minor (p. 995)
  - Victims and Victim Services Minor (p. 996)
  - Law Enforcement Certificate (p. 998)
  - Nonprofit Management Certificate (p. 999)
  - Victims and Victim Services Certificate (p. 1000)

School of Public Affairs Graduation Requirements

For additional information regarding Graduation policies and procedures, please visit the Graduation section of the catalog.

Residency Requirement

A minimum of 30 credits must be taken through CU Denver. At least 21 of the final 30 credits of the degree must be earned through CU Denver. Please refer to your major program page for any additional major-specific residency requirements.

Social Sciences Requirement

The School of Public Affairs requires students to select three courses from the Social Sciences area of the CU Denver Undergraduate Core Curriculum. Please see your advisor for guidance on which courses will be most beneficial for your individual major.

Upper-Division Credits

Students must complete a minimum of 45 upper-division credits.

Foreign Language Requirement

School of Public Affairs students must demonstrate proficiency in a foreign language at the second semester college level prior to graduation. This is accomplished through course work, by examination, or through documented evidence that the student has attained the equivalent proficiency in a language other than English.

Students using high school credit to satisfy the proficiency requirement at CU Denver must have received a grade of C- (1.7) or higher in the final semester of the second-year course. Students using college-level transfer credit or coursework at CU Denver to satisfy the proficiency requirement must receive a grade of C- (1.7) or better in the second-semester college-level course. There is no P+/P/F or S/U option for any course taken for the foreign language requirement.

Student Placement in Lower-Division Language Courses

High School Background	Course Number/Level to Take
No language courses or background	1010
One year of high school	1020
Two years of high school	2110
Three years of high school	2120
Four years of high school	Upper-division courses

Note: High school programs vary substantially, and the above levels may not be appropriate for all students. Modern Languages departmental advisors will be happy to speak with any student who feels unsure about his or her placement (303-556-4893).

Prior College Courses

Students wishing to enroll in a lower-division course that does not directly follow their last completed college course in the regular sequence should consult with an appropriate faculty member of the Department of Modern Languages prior to enrollment, 303-556-4893.

Proficiency Testing

Students may also show their level of proficiency by taking a computerized placement/proficiency exam. Call the Department of Modern Languages, 303-556-4893, for scheduled exam times. The languages tested are French, German, and Spanish; students wishing to show proficiency in other languages should consult the Department of Modern Languages for documentation. Students may take an exam only once per semester.

Students who have achieved some proficiency in a foreign language through other means than academic courses should also consult with an appropriate faculty member of the Department of Modern Languages prior to enrollment. This is especially important for native and heritage speakers.

Major Requirement

Complete all requirements associated with your individual major. See the program page for detailed requirements.

Internship Requirement

Undergraduate students without professional experience in the field must complete a minimum 3-credit-hour internship under the direction of a faculty sponsor and the CU Denver Experiential Learning Center (ELC). In order to register for internship credit, students must work with the ELC. Students cannot register for internship credit on their own. Internships must align with the academic calendar and can be completed fall, spring, or summer semester.

Internships are beneficial for career exploration early in a student's academic career and/or for job experience after developing academic content in the major. Internships are considered a high-impact practice and consistently reported as one of the most beneficial experiences as part of the student's undergraduate academic career.

In order to be eligible for an internship, undergraduate students must have a minimum 2.0 cumulative GPA and a minimum of 15 semester hours completed at CU Denver. Bachelor of Arts in Criminal Justice (BACJ) students must have successfully completed CRJU 1000 and CRJU 2041 before registering for the internship, and Bachelor of Arts

in Public Administration (BAPA) students must have successfully completed PUAD 1001 and a 2000-level PUAD course before registering for the internship.

All students must work with the ELC, which provides support for students in all aspect of their internship search, including resume and cover letter help, search assistance, practice interviews, and general guidance and advice. Students are strongly encouraged to connect with the ELC at least one full-semester (~6 months) in advance of the semester in which they intend to complete their internship.

There is an internship waiver available for students with previous professional work experience related to the student's major. Previous volunteer and/or internship experience does not qualify as professional work experience for the purposes of the waiver. The waiver is not credit-bearing. When the internship requirement is waived, students will replace the 3-credit-hour internship with a major elective. Students eligible for the internship waiver are strongly encouraged to submit the internship waiver as soon as possible to have an accurate record of degree requirements. To discuss the internship waiver please contact your academic advisor.

School of Public Affairs Policies

For additional information regarding policies and procedures, please visit the Records and Registration (p. 55) section and the Academic Policies and Procedures (p. 109) section of the catalog.

How to Change a Major

Students who want to transfer to the School of Public Affairs from another college or school of the University of Colorado Denver must formally apply for an intra-university transfer (IUT) to the School of Public Affairs Advising Office (spa.advising@ucdenver.edu). To apply for an IUT, students must submit an IUT form to the School of Public Affairs Advising Office. IUT forms are available from the Office of the Registrar or from an academic advisor.

Special Grading Options

Core knowledge area and general electives are the only courses that can be completed P+/P/F. Pass/fail grades of D-, D, and D+ are translated by the Registrar's Office to a P (pass) grade. Pass/fail grades of C- and above are translated by the Registrar's Office to a P+ grade. P+/P grades do not affect students' GPA; F grades do affect students' GPA. Students interested in completing a course as P+/P/F must submit a Pass+/Pass/Fail Form by the published deadline. Students need to consult the academic calendar posted on the Office of the Registrar's webpage. Up to 16 credits may be completed as P+/P/F or S/U and credited toward the bachelor degree. Students can complete a maximum of 6 credits P+/P/F in any one semester.

Note: Effective Summer 2023 courses that were previously graded on the basis of Pass/Fail (P/F) are now graded with Satisfactory/Unsatisfactory (S/U). This is based on faculty approval of APS 1025 in May 2022. Students still have the option to use the P+ grading system (P+/P/F) by student selection for elective courses up to the maximum allowed by their program.

Academic Integrity Policy

This policy sets forth the definitions and procedures to be used in the School of Public Affairs for identifying and responding to instances of alleged academic misconduct by students. This policy should be read in connection with Campus Administrative Policy 7050, Academic Integrity.

1. **Definition of academic misconduct.** According to Campus Administrative Policy 7050, academic misconduct is defined as (1) a student's use of unauthorized assistance in an attempt to deceive an instructor of other person who is assigned to evaluate the student's work in meeting course and degree requirements, or (2) actions that interfere with the ability of the instructor to fairly judge the work of the student or other students. Academic misconduct includes any of the following behaviors:
    a. Plagiarism. Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. The incorporation of another person's work into one's own requires appropriate identification, regardless of the means of appropriation. Plagiarism includes but is not limited to the following, when the source is not disclosed:
        i. Word-for-word copying of another person's ideas or words;
        ii. The mosaic (the interspersing of one's own words here and there while, in essence, copying another's work);
        iii. The paraphrase (the rewriting of another's work, yet still using their fundamental idea or theory);
        iv. Fabrication of references (inventing or counterfeiting sources);
        v. Submission of another's work as one's own; or
        vi. Neglecting quotation marks on material that is otherwise acknowledged.
    b. Cheating. Cheating involves the possession, communication, or use of information, materials, notes, study aids, or other devices not authorized by the instructor in an academic exercise, or communication with another person during such exercise for the purpose of obtaining or providing unauthorized information or materials. "Authorization" is legitimate only if given by the faculty member responsible for the evaluation of the student's work. Examples of cheating include but are not limited to:
        i. Copying from another's work or receiving unauthorized assistance from another person during an academic exercise or in the submission of academic assignments;
        ii. Using an electronic device when not permitted;
        iii. Collaborating with another student during an academic exercise without the prior consent of the instructor.
    c. Fabrication or falsification.
        i. Fabrication: inventing or counterfeiting information, such as creating results not obtained in a study or laboratory experiment.
        ii. Falsification: deliberately altering or changing results to suit one's needs in an experiment, creative work, or other academic or creative exercise.
    d. Multiple submissions: The submission of academic work for which academic credit has already been earned, when such submission is made without instructor authorization.
    e. Misuse of academic materials: The misuse of academic material includes, but is not limited to, the following:
        i. Stealing or destroying library or reference materials or computer programs;
        ii. Stealing or destroying another student's notes or materials, or having such materials in one's possession without the owner's permission;

iii. Receiving assistance in locating or using sources of information in an assignment when such assistance has not been authorized by the instructor;
iv. Possessing or using prior examinations or answer keys, unless authorized by the instructor;
v. Altering, forging, copying and pasting, or falsifying academic materials;
vi. Selling or purchasing prior examinations, digital media, quantitative formulae, papers, or assignments.

f. Complicity in academic misconduct: Complicity involves knowingly allowing, or contributing to, another's academic misconduct.

2. **Procedures**

a. Discovery of alleged misconduct. When a faculty member suspects that a student may have engaged in academic misconduct, the faculty member shall notify the student in writing and give the student an opportunity to respond. If the faculty member is satisfied that no academic misconduct has occurred, whether intentional or unintentional, the matter is ended.

b. Reporting alleged misconduct to the university. If the faculty member concludes that academic misconduct may well have occurred, whether intentional or unintentional, the faculty member shall submit the allegation via an online form to the university Office of Student Conduct and Community Standards and notify the Associate Dean for Student Affairs via email. When submitting the online form, the faculty member should request that the Office of Student Conduct email a copy of the report to the faculty member and forward that copy to the Associate Dean (and to the Associate Dean of the Graduate School if the student's program is overseen by the Graduate School).

c. Determination of responsibility and assignment of sanctions. The faculty member and the student may meet informally to discuss the misconduct and an appropriate sanction prior to the submission of the allegations to the Office of Student Conduct. If that meeting results in an agreement as to the sanction, the faculty member's report shall include the date of the informal meeting and a description of the sanctions. If the faculty member and the student have not met prior to the submission of allegations, the Office of Student Conduct will assist in setting up a meeting, and the faculty member will determine responsibility and appropriate sanctions after that meeting, and will notify the student in writing (and copy the Associate Dean for Student Affairs, and the Associate Dean of the Graduate School if appropriate).

d. Appropriate sanctions. The faculty member is entitled to determine and impose appropriate academic sanctions for misconduct occurring in his or her course. For misconduct that appears to have been unintentional or careless, faculty are encouraged to provide an opportunity to help the student learn and grow so as not to repeat the misconduct in the future. This educational sanction may be in addition to or as a substitute for academic sanctions such as a lowered or failing grade. Faculty members may consider whether a student has previously been found to have engaged in academic misconduct in imposing sanctions. Faculty members who would like support in determining appropriate sanctions are encouraged to contact the SPA Associate Dean for Student Affairs.

e. Opportunity for appeal. The student should be notified in writing of his or her right to appeal the faculty member's determination to the campus Academic Integrity Committee, pursuant to Campus Administrative Policy 7050.

f. Program or school level sanctions. In cases of particularly egregious misconduct, or repeated misconduct, the faculty member, the Associate Dean for Student Affairs, and/or the Academic Integrity Committee may recommend to the Dean that the student be suspended or expelled from the program or the School.

Adopted by SPA Faculty Council on November 19, 2020

Procedures for Resolving Student Academic Grievances

These are the procedures by which a student may seek to resolve a dispute about an academic issue, such as a grade in a SPA course or a decision about academic standing in a SPA program.

Please note that faculty members have wide discretion in assigning grades, and this discretion will not be disturbed absent evidence that the faculty member has made a clear mistake, has failed to adhere to stated standards, or has otherwise engaged in arbitrary behavior. It is the student's responsibility to provide evidence that the faculty member acted outside of their traditional discretion.

Disputes about grades in non-SPA courses or relating to non-SPA programs should be handled according to the grievance resolution process of the unit involved.

Informal Resolution of Academic Grievances

Absent unusual circumstances, students must first discuss the situation with the faculty member involved to see whether an informal resolution is possible.

Filing a Grievance

If the student and the faculty member are unable to reach resolution, the student may file a grievance with the Associate Dean for Student Affairs. All grievances should be filed as quickly as possible, preferably within the same or following semester but in no case to exceed six months after the decision that is the subject of the grievance.

The grievance may be filed via email or in paper format, and should contain all of the following information:

- The student's name, degree program, and student ID number
- The name of the faculty member involved, if any
- The course name and semester, if the dispute involves a course
- A brief statement of the nature of the grievance (not to exceed two pages)
- Any evidence that the student wishes to be considered in support of the grievance, such as a course syllabus, assignments, and communications with the faculty member
- The remedy requested by the student

The Grievance Investigation

The Associate Dean will acknowledge receipt of the grievance, forward a copy to the faculty member involved and to the faculty program director. The faculty program director may decide to seek informal resolution by mediating between the student and the faculty member. If the faculty program director does not seek or obtain informal resolution, the Associate Dean will begin investigating the grievance. Investigation of the grievance will include speaking to the student and to the faculty member

involved, and the Associate Dean may request additional information from the student or the faculty member. The Associate Dean of Student Affairs may also seek input or support on the investigation from the Associate Dean of Faculty affairs as needed.

In the event that the Associate Dean for Student Affairs is involved in the circumstances leading to the grievance, the grievance will be investigated by the Associate Dean for Faculty Affairs.

The Associate Dean will conclude the investigation and prepare a written report. The Associate Dean will strive to complete this report within 30 days of the filing of the grievance; however, please note that additional time may be required due to breaks between semesters or over the summer or efforts by the faculty program director to resolve the dispute informally.

Decision by the Dean

The Associate Dean's report shall be submitted to the Dean and shall include a recommendation about the disposition of the grievance. Within ten business days, the Dean will decide whether or not to follow the recommendation, and will forward a copy of the report together with the Dean's decision on the disposition of the grievance to the student, the faculty member, and the faculty program director.

Appealing the Dean's Decision

If the student is not satisfied with the Dean's decision, he or she may make a written request to the Dean that a faculty panel be appointed to review the grievance and consider the appeal. This request should be submitted within ten business days after receipt of the Dean's decision, and may be submitted via email. The Dean shall appoint a panel consisting of three faculty members who were not involved in the original circumstances of the grievance. The faculty panel will consider the evidence and will make a written report with recommendations to the Dean within 30 days, unless additional time is required due to breaks between semesters or over the summer. The Dean will decide whether to uphold or deny the appeal, and will notify the student and faculty member of that decision in writing within ten business days.

The decision of the Dean is final with respect to students in the BACJ, BAPA, and MPA programs. Students in the MCJ and PhD programs may be permitted to appeal the Dean's decision to the Graduate School according to its procedures.

Resolution of Other Types of Disputes

This policy only relates to academic grievances at SPA. Other types of disputes are handled in different offices and/or with different procedures, as follows:

- Disputes relating to academic integrity are handled according to SPA's Academic Integrity Policy. Contact your advisor or the Associate Dean for Student Affairs for more information.
- Disputes related to protected category discrimination (such as race, sex, or disability discrimination) are handled by the Office of Equity.
- Disputes related to the conduct of other students are handled by the Office of Student Conduct.
- The Ombuds Office is available to discuss or mediate other types of interpersonal disputes if needed.

Last revised September 2017

Public Affairs

Programs Offered

- Criminal Justice, BA (p. 981)
- Criminal Justice - Law Enforcement Concentration, BA (p. 983)
- Criminal Justice - Victims and Victim Services Concentration, BA (p. 984)
- Criminal Justice, BA/MCJ (p. 986)
- Public Administration, BA (p. 987)
- Public Administration - Nonprofit Management Concentration, BA (p. 989)
- Public Administration, BA/MPA (p. 990)
- Public Administration, BA/Master of Public Policy (p. 991)
- Criminal Justice Minor (p. 992)
- Law Enforcement Minor (p. 993)
- Nonprofit Management Minor (p. 994)
- Public Administration Minor (p. 995)
- Victims and Victim Services Minor (p. 996)
- Law Enforcement Certificate (p. 998)
- Nonprofit Management Certificate (p. 999)
- Victims and Victim Services Certificate (p. 1000)

Faculty

To learn more about our renowned faculty, please view their bios on the School of Public Affairs website (https://publicaffairs.ucdenver.edu/people/faculty/).

Criminal Justice (CRJU)

CRJU 1000 - Criminology and Criminal Justice: An Overview (3 Credits)
This course is designed to provide an overview of the criminal justice process and the criminal justice system in general. Concepts of crime, deviance and justice are discussed and general theories of crime causality are examined. Special emphasis is placed on the components of the criminal justice system: the police, the prosecutorial and defense functions, the judiciary and the field of corrections. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

CRJU 2000 - Professional Development in Criminal Justice (2 Credits)
In this course, students will explore, examine, and reflect on their strengths, interests, and personality assessments as they relate to the criminal justice field and professional development. Participants will conduct career-related research and develop individualized action plans designed to bridge the gap between their current skills and experiences and those desired by employers in the criminal justice field. Prereq: UNIV 1110. Restriction: Restricted to Criminal Justice majors. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: UNIV 1110 Restriction: Restricted to Criminal Justice majors

CRJU 2041 - Criminological Theory (3 Credits)
This course examines the nature and causes of crime and policies within and outside the criminal justice system to predict, prevent, and correct criminal, delinquent, and deviant behavior. It involves a critical appraisal of biological, psychological, economic, and sociological theories and frameworks that explain crime, delinquency, and deviance. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3100 - Research Methods (3 Credits)
This course teaches students how to formulate research questions related to criminology and crime and justice. It addresses how to design research in the field, including choosing an appropriate method and sampling strategy and collecting, analyzing, interpreting, and reporting data and findings. Specific substantive elements are included in research design (e.g., various types of probability and non-probability sampling; strengths and weaknesses of surveys, interviews, and other methodological approaches; experimental and non-experimental designs; qualitative techniques; etc.) Other substantive topics are addressed, including research ethics, consuming research, and writing in different settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3150 - Statistics for Criminal Justice (3 Credits)
This course introduces descriptive and inferential statistics and the use of computer software to analyze criminal justice data. Course content includes hypothesis testing and the basic analysis of continuous and discrete dependent variables related to criminology and criminal justice. Prereq: CRJU 3100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 3100

CRJU 3160 - White-Collar Crime (3 Credits)
Employs social science and legal approaches to examine crime committed by corporations as well as by individuals in white-collar occupations. Topics include how such crimes are socially defined, who commits them, which social contexts promote them, who is victimized, and how society and the criminal justice system respond. Cross-listed with CRJU 5574. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3220 - Community Corrections (3 Credits)
This course focuses on innovative community-based strategies for dealing with criminal offenders. Correctional alternatives to imprisonment discussed in this course include probation and parole and various community programs, such as day reporting centers, electronic monitoring, half-way houses, and boot camp programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3250 - Violence in Society (3 Credits)
This course examines various aspects of violence, including distribution over time and space; situations and circumstances associated with violent victimization and offending; and how social institutions, community structure, and cultural factors shape violent events. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3251 - Crime and the Media (3 Credits)
This course surveys the relationships between mass media, crime, offenders, victims, and criminal justice. It explores how the criminal justice system and its agents, accused and convicted offenders, and victims, are portrayed in the media and the influence of these depictions on society, public policy, and the criminal justice system. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3252 - Violent Offenders (3 Credits)
This course consists of a historical overview of violence in American society. Course content includes an examination of violent crime rates over time, societal explanations for changes in rates and an examination of the theoretical causes and preventative strategies for acts of violence. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3270 - Case Studies in Criminal Justice (3 Credits)
This seminar examines the lives of people who live on the margins of a society that perceives them as outsiders. Ethnographic studies that utilize observation, participant observations, and interviews as their primary research methodology are assigned in order to develop a critical understanding of the social marginalization and cultural aspects of the lives of real human beings living constantly on the edge of the law. Cross-listed with CRJU 5270. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3280 - Trauma Among Correctional Populations (3 Credits)
This course provides a comprehensive overview of trauma and the relationship of trauma to criminal offending. Topics includes the definition of trauma, the impact of trauma on development, lifelong consequences of chronic exposure to adverse events, and how to integrate knowledge about trauma into organizational policies in correctional settings. The class focuses on understanding the components of a trauma-responsive environment in correctional settings and incorporating trauma recovery principles into practice. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3285 - Trauma in the Criminal Justice System (3 Credits)
This course examines trauma as widely prevalent among those who are served by the criminal justice system and experienced disproportionately among criminal justice professionals. Trauma prevalence, theory, prevention, and interventions through a trauma stewardship lens for victims of multiple forms of trauma, including vicarious traumatization and secondary traumatic stress, will be emphasized through an all-inclusive view across the criminal justice continuum. Cross-listed with CRJU 5285. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3290 - Capital Punishment (3 Credits)
This course examines in-depth a comprehensive range of issues surrounding capital punishment. Specifically, it looks at the history of capital punishment, methods of execution, legal issues and case law, deterrence, miscarriages of justice, discrimination in the capital charging and sentencing system, and the role of the death penalty internationally. The coverage of these issues relies on many sources, including scholarly readings, non-fiction books, court cases, websites, videos and documentaries, speeches, and media. Cross-listed with CRJU 5290. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3310 - Contemporary Issues in Law Enforcement (3 Credits)
This course examines law enforcement's role in contemporary society and the impact of police interaction on other segments of the criminal justice system. Special attention is paid to controversies related to police training and education, career development and community relations. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3320 - Police-Community Relations (3 Credits)
This course focuses on the police and community response to crime. Course content includes an overview of the major concepts and issues involved in what many consider to be a major fundamental shift in the approach and operations of modern policing. The origins, meaning, development and experiences of community policing and various assessments of the advantages and disadvantages of community policing are emphasized. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3330 - Serial Killers (3 Credits)
This course looks at various aspects of serial killing, including definitions, statistics, and demographics of serial killers and their victims. It examines factors that are correlated with serial killing, as well as criminal justice responses to serial killers (e.g., investigative techniques, prosecuting and defending accused killers, etc.) It also includes cases of serial killers. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3340 - Cybercrime (3 Credits)
This course introduces the history and evolution of cybercrime. It explores different types of cybercrime and the issues they present socially, for national security, and in the context of the criminal justice system. Specifically, with respect to the criminal justice system, the class focuses on how cybercrime is defined in laws, prevented, investigated, prosecuted, and sentenced. It also looks at how cybercrime impacts victims and society as a whole. Ethics and policy implications at each stage of the criminal justice process and outside of the justice system are analyzed. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CRJU 3410 - Probation and Parole (3 Credits)
This course is appropriate for students who have a specific interest in the role of probation and parole as correctional sanctions in community settings. Substantive topics, including the presentence investigation report, privatization, and the roles and responsibilities of probation and parole officers, are discussed. Particular attention is paid to research on the effectiveness of probation and parole, factors that contribute to the successful completion of probation and parole, and the role that the community and citizens play in these community corrections processes. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3420 - Pleas, Trials and Sentences (3 Credits)
This course analyzes case materials involving pleas, trials, and sentences. Course content includes the dimensions of criminality, the specific elements of major crimes, plea bargaining, the use of confessions, fair trial procedures, and various aspects of criminal sanctions, including cruel and unusual punishments. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3510 - Drugs, Alcohol, and Crime (3 Credits)
This course looks at the socially constructed nature of drugs and drug policy. It explores the connection between drugs and crime within the socio-historical context of contemporary U.S. drug policy. Special emphasis is placed on the relationship between drugs and alcohol abuse and criminal offending, including the criminal justice system responses to possessing, distributing, and using illegal substances. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3520 - Juvenile Justice (3 Credits)
This course examines the development, change, and operation of the American juvenile justice system and the social factors that shape the identification and treatment of juvenile offenders. Special emphasis is placed on juvenile law and methods of dealing with youthful offenders. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3530 - Juvenile Delinquency (3 Credits)
This course looks at deviant and delinquent behavior committed by minors in American society. It explores the social construction of juvenile delinquency and factors and conditions contributing to at-risk and delinquent behavior. Finally, it examines the control and treatment of juvenile offenders prevention programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3540 - Crime and Delinquency Prevention (3 Credits)
This course provides students with an overview of issues related to crime and delinquency prevention, both from criminological and criminal justice points of view. Crime prevention programs that encompass both the individual and community levels are examined. Responses to juvenile offenders-ranging from prevention and diversion to institutional corrections and after care are explored in context of youth policy generally. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3575 - Offenders With Mental Health Disorders (3 Credits)
Examines the offender who may be mentally disordered. Special attention is paid to the various phases of the criminal justice system where psychiatrists are involved (e.g., diversion, fitness, insanity and sentencing), dangerous sex offender legislation, "not guilty by reason of insanity" and "guilty but mentally ill" statutes, and issues concerning confidentiality, informed consent, and treatment. Cross-listed with CRJU 7575 and 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4010 - Public Service in Emergency Management and Homeland Security (3 Credits)
Introduces emergency management and homeland security including: management of hazards, emergencies, disasters, and the networks of government and nonprofit organizations providing services. Focuses on principles of emergency management and homeland security at state and local jurisdictional levels. Cross-listed with PUAD 4010, PUAD 5650, and CRJU 5650. Prereq: CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4012 - Principles of Emergency Management (3 Credits)
Introduces the discipline and practice of emergency management. Topics include administrative practice and processes by which public policy shapes governmental responses to hazards, emergencies, and disasters. Cross-listed with CRJU 5655, PUAD 4012, and PUAD 5655. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4014 - Federal Wildlife and Fisheries Investigations (3 Credits)
Students will learn about federal wildlife laws and an overview of each law will be provided, along with methods and tools used to investigate possible violations of the laws. Prosecuting cases will be covered, and actual cases will be reviewed so students are able to see practical application of the law. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

CRJU 4015 - Intelligence Writing and Briefing (3 Credits)
This course provides an overview of intelligence analysis and aims to provide the skills and tools necessary to effectively communicate results to consumers. Students will be familiarized with the analytical, perceptual, and cognitive pitfalls of conducting intelligence analysis and learn a variety of strategies for overcoming these problems, preparing professional intelligence products, and presenting executive-level intelligence briefings. Cross-listed with CRJU 5015. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4042 - Corrections (3 Credits)
This course consists of an overview of the field of penology and corrections. Attention is paid to conflicting philosophies of punishment, criminological theory as it applies to the field of corrections, the selectivity of the process through which offenders move prior to their involvement in correctional programs, institutional corrections, alternative correctional placements, and empirical assessments of the short and long-term consequences of one's involvement in correctional programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4043 - Law Enforcement (3 Credits)
This course presents an overview of the role of police in the United States. Attention is placed on the origins of policing, the nature of police organizations and police work, patterns of relations between the police and the public, discretion, and the police role in a sociological context. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4044 - Courts and Judicial Process (3 Credits)
This course examines the basic functions, structure, and organization of the federal and state court systems, with special attention on the criminal court system. It looks at the courtroom workgroup and agents within it, including the prosecutor, defense attorney, and judge. It focuses on the influence of judicial behavior on the court process by examining judges' policy preferences, legal considerations, group processes within courts, and courts' political and social environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4100 - Administration of Criminal Justice (3 Credits)
Analyzes the policies and practices of agencies involved in the criminal justice process, from the detection of crime and arrest of suspects through prosecution, adjudication, sentencing and imprisonment, to release. The patterns of decisions and practices are reviewed in the context of a systems approach. Cross-listed with CRJU 5100. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4120 - Race, Class, and Justice (3 Credits)
This course examines the relationships between race, social class, and crime. Attention is given to theoretical explanations, empirical research, and patterns of criminal behavior. The class focuses on historical frameworks that are relevant to current perspectives on the impact and interactions of race, class, and crime in the field. It examines race, class, and race-by-class disparities and discriminatory practices at different phases of the justice system from detainment through sentencing and appeals. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4121 - Ethics in Criminal Justice (3 Credits)
This course is designed to prepare students to identify and critically examine ethical issues in the criminal justice system by applying ethical decision models. It also provides students with the opportunity to analyze how they would resolve these issues according to their own values and beliefs while staying within the boundaries of the law and formal and informal professional ethics. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4130 - Poverty, Crime, and Justice (3 Credits)
This course analyzes theories and empirical research related to the causes of criminal behavior committed by individuals of lower socio-economic status. Further, it examines the economic and social costs of crimes committed by under-resourced individuals and crime-prevention strategies that are connected to crimes committed by under-resourced individuals. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4140 - Interpersonal Violence (3 Credits)
This course examines the criminal justice systems response to intimate partner violence by focusing on the interactions between victims, offenders, and components of the criminal justice system. By exploring the dynamics of intimate partner violence, this course addresses the theories, history, research, legislation, and policy implications related to the criminal justice system's response to intimate partner violence. Cross-listed with CRJU 5150. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4150 - Sex Offenders and Offenses (3 Credits)
This course explores historical and current practices of the criminal justice system to address sex offenders and offenses. Topics include the history of sexual abuse, etiology of offenders, victims' issues, juvenile sex offenders, risk assessment, and treatment/supervision approaches to sex offenders and offenses. Prereq: CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4170 - Victimology (3 Credits)
This course involves the scientific study of crime victims and focuses on the physical, emotional, and financial harm people suffer at the hands of offenders. Emphasis is placed on victim-offender relationships, interactions between victims and the criminal justice system, and connections between victims and other social groups and institutions. Theories, history, research, legislation, and policy implications related to the social construction of "the victim" are explored. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4171 - Homicide Studies (3 Credits)
This class examines criminal homicide from all angles: the offenders, the victims, the police, prosecution, defense, jurors, and judges. It looks at investigative techniques and the latest science involved in criminal investigation, jury selection, and other criminal justice system issues. It focuses on what is arguably the most serious form of homicide, murder, exploring sensational cases that involve delving into the psyche of murderers. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4172 - Crime Forensics (3 Credits)
This course offers an overview of specialized knowledge, techniques, principles, and technologies of forensic sciences and criminal investigations. Students will explore the fundamentals of proper evidence collection, preservation, and evidence analysis techniques. Students in this course will develop an understanding of the practical application of forensic science to legal issues and disputes. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4173 - Crime Scene Investigation (3 Credits)
Crime Scene Investigation is a course that is designed to give the student a working knowledge of how to investigate and collect evidence on a variety of crime scenes. It demonstrates how different types of physical evidence is used to solve crimes, specifically looking at forms of evidence like gun shots, blood spatter, and finger-printing. It also looks at the importance of professional skills, such as academic knowledge, problem-solving, effective communication, and the use of technology. Other issues, such as historical context and ethics, will be discussed. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4180 - Comparative Study of Criminal Justice Systems (3 Credits)
This course analyzes the dynamics of criminality and the social responses to crime across countries. Special emphasis is placed on methods of comparative legal analysis utilized to examine international differences in crime and justice, international cooperation in criminal justice, and crime and development. Prereq: CRJU 1001. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4190 - Gender and Crime (3 Credits)
This course explores issues surrounding women as offenders and victims. It investigates explanations for women's involvement in illegal activities and looks at gender-based disparities and discrimination in the criminal justice system's treatment of women who are accused and convicted of crimes. The class also examines women's participation in criminal justice professions, including law enforcement, corrections, judicial processes, and law. Cross-listed with CRJU 5553. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4200 - Wrongful Convictions (3 Credits)
Explores the continuum of justice-system errors ranging from persons who are falsely accused (arrested, prosecuted, and tried) to those who are wrongly convicted and imprisoned or sentenced to death row and erroneously executed. Cross-listed with CRJU 5200. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4210 - Prisoner Reentry (3 Credits)
Focuses on prisoner reentry, including strategies to prepare inmates for release, reduce recidivism, and facilitate adjustment in the community while meeting the demands of public safety. Cross-listed with CRJU 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4230 - Treatment Approaches in American Corrections (3 Credits)
This course examines the origins and historical development of prisons and jails in America. Particular attention is given to the impact of reform movements; the rise of centralized correctional systems; and regional and other socially differentiated variations in the practice of punishment. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4252 - Criminal Offenders: Evidence-Based Decision-Making (3 Credits)
This course will introduce the core principles of evidence based programming and tools of motivational interviewing as it is used currently with the offender population. In addition, students will learn how to utilize these skills working with specific offender populations. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4310 - Leadership Roles in Criminal Justice (3 Credits)
The course is designed to enhance interest, experience, and knowledge in leadership that promotes professionalism and ethical behavior among criminal justice professionals. Individual and organizational dynamics are explored through a critical perspective, focusing on criminal justice roles and responsibilities. The class teaches effective leadership skills in areas such as team building, strategic planning, and decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4331 - Crime Analysis and GIS (3 Credits)
Serves as an introduction to the uses and applications of analysis within law enforcement, including the role of analysis in law enforcement, theories that guide analysis and police practices, commonly used data sources and technology, and techniques for various types of analysis utilized in law enforcement. Cross-listed with CRJU 5331. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4410 - Criminal Law and Constitutional Procedures (3 Credits)
This course focuses on substantive criminal law and constitutional rights of the accused in criminal proceedings. Course content includes the legal elements of major crimes. It also addresses legal aspects of investigation, search and seizure, arrest, custodial interrogation, the appointment of counsel, and constitutional rights that apply during trials (e.g., right to confront witnesses, be protected against self-incrimination, be tried by a jury of one's peers, etc.) Rules governing the admissibility of evidence in court are also examined. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4430 - Law and Society (3 Credits)
This course introduces students to the scholarly study of law. Students will become familiar with social scientific perspectives of the law, legal institutions, the legal process, and the impact of law on behavior. Particular emphasis is placed on the interplay between the social construction of crime through law, criminal behavior and individuals targeted in criminal justice processes in America. Additional topics include theories of law and legality, comparative legal systems, police, lawyers, judges, juries, and the use of social science expertise in the justice system. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4440 - Courts and Social Policy (3 Credits)
This course involves the study of emerging trends and issues in the administration of the courts, the emerging role of the judiciary in the administration of programs in the public and private sectors, and the implications of court administration on social policy. Course content includes the history of the judicial approaches to the criminal justice administrative process and substantive social policy. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4450 - Homeland Security (3 Credits)
This course is an in-depth analysis of homeland security in the U.S. Topics include the initial concepts and strategies of securing land borders, seaports, and airports, the establishment of the Department of Homeland Security, and the functions and operations of the DHS today and in the future. Prereq: Completion of CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4520 - Gangs and Criminal Organizations (3 Credits)
This course traces the origins and historical development of the activities known as "organized crime." These crimes are some of the most dangerous to American society and range from the commonly known offenses of gambling and narcotics to the more subtle and sophisticated, less understood but equally serious, crimes of extortion, commercial bribery, and political corruption. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4530 - Families and Intergenerational Violence (3 Credits)
This course focuses on the family as the primary institutional mechanism of social control. Structured around social learning theory, it explores the relationships between exposure to childhood violence and violence later in life, including dating relationships during adolescence and adulthood and violence in marital relationships. The course also looks at the impact of childhood violent victimization on juvenile delinquency, adult criminality, and violent behavior in general. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4540 - Evidence-Based Approaches in Law Enforcement (3 Credits)
This course provides an introduction to the uses and applications of analysis within law enforcement, including the role of analysis in law enforcement, theories that guide analysis and police practices, commonly used data sources, technology, and a practical introduction to the techniques for various types of analysis utilized in law enforcement. Prereq: CRJU 1000, 3100, and 4043. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CRJU 1000, 3100, and 4043.

CRJU 4600 - Special Topics in Criminology and Criminal Justice (1-6 Credits)
This highly specialized seminar addresses cutting-edge and emerging developments in the fields of criminology and criminal justice and provides students and faculty with the opportunity to explore significant themes, issues, and problems from a broad interdisciplinary perspective. Topics vary from semester to semester. Prereq: CRJU 1000. Repeatable. Max hours: 18 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 18.
Pre: CRJU 1000

CRJU 4700 - Community-Based Field Experience and Seminar (3 Credits)
Students work in small groups to complete substantive projects for government agencies and community organizations, led by faculty instructor. Topics addressed will vary depending on the needs of the community partner. Prereq: Completion of CRJU 1000 and CRJU 3100.
Restriction: Restricted to SPA students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Completion of CRJU 1000 and CRJU 3100. Restriction: Restricted to SPA students.

CRJU 4710 - Environmental Crime and Justice (3 Credits)
Environmental Crime and Justice will look at the disproportionate benefits and burdens of environmental "profits" (e.g., open spaces, clean air and water, etc.) and contamination (which results from behaviors that include, but are not limited to crime), as well as the implications of these disparities on certain areas, particularly communities of color and indigenous communities. The role of the government, the private sector, non-profit organizations, and the environmental justice movement in creating, perpetuating, and minimizing environmental crime and its disparities will be examined, with part of the focus being on theories within critical criminology that address issues of environmental crime injustices. The nature of environmental offenders and victims will be explored. Policies and programs that have been organized to address environmental crime and other injustices and their effects (e.g., quality of life, birth defects, childhood asthma, lead poisoning, cancer, etc.) will be reviewed, including responses by the criminal justice system to environmental crime. Students will examine critically the consistencies and inconsistencies in institutionalized mechanisms that are set up, either intentionally or more subtly, to create, reinforce, or minimize environmental crimes and injustices. Cross-listed with CRJU 5710. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4840 - Independent Study: CRJU (1-6 Credits)
This course consists of instructor-guided research in an area of mutual interest to the student and instructor or a student-driven project supervised by the instructor. Students are responsible for selecting their area of inquiry prior to contacting the instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CRJU 4939 - Internship (1-9 Credits)
Internships involve a career-related supervised experiential course in a criminal justice or related agency. Permission to enroll must be preceded by an application for an internship. Prereq: Permission of instructor and advisor is required for undergraduate students. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CRJU 4961 - Capstone (1-10 Credits)
Synthesizes competencies gained throughout the course of study into a client-based research project. Students conduct independent research, complete a final project demonstrating their qualifications and expertise.
Restriction: Restricted to undergraduate students in the School of Public Affairs. Max hours: 10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Restriction: Restricted to undergraduate students in the School of Public Affairs.
Additional Information: Report as Full Time.

CRJU 4995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with CRJU 5995. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall.

Public Administration (PUAD)

PUAD 1000 - Public Service Online Success and Career Exploration (1 Credit)
Offers Public Service majors the chance to explore their career field and adapt to an online learning environment. Topics will include Canvas tips, online course etiquette, community building for the online learner, how online students can utilize CU Denver student-success resources, writing and citation tips, and contemporary time management techniques.
Restriction: Restricted to freshmen or undergraduates with less than 30 credit hours. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to freshmen or undergraduates with less than 30 credit hours.

PUAD 1001 - Why You Should Care About Government: Public Service and Administration (3 Credits)
Students will gain the opportunity to understand the discipline of public administration; public administration aims to help public and nonprofit agencies more effectively respond to public demands made by citizens, organizations, and other levels of government. Explore multiple career paths to advancing the public good in government and nonprofits, including volunteerism, citizenship, community engagement, and leadership. Consider implications for enhancing public integrity and trust in government. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

PUAD 2001 - Management for Public Service (3 Credits)
Learn how managers in public sector organizations foster human capital and manage performance in a diverse, inclusive, and collaborative workforce. Examine strategic management techniques, human resource law and procedures. Explore the values of character and competence in creating effective organizations. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 2002 - Policy and Advocacy (3 Credits)
Students will develop skills and tools for creating policy change. Public policy is the decisions and nondecisions of public actors as they attempt to address social, economic and political topics. The course will introduce students to policy change, lobbying, advocacy, and the ways in which policies lead to entrenched coalitions, perceptions, behaviors, and funding models. Max hours: 3 Credits
Grading Basis: Letter Grade

PUAD 3001 - Project Management and Program Evaluation (3 Credits)
Examine strategic management techniques, organizational theory, and tools for organizational change. Explore structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and services, and organizational strategy and effectiveness. Learn the analytical, critical thinking, and problem-solving skills required for program design, implementation, and evidence based decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3002 - Organizational and Strategic Management (3 Credits)
Examine strategic management techniques, organizational theory, and tools for organizational change. Explore structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and services, and organizational strategy and effectiveness. Learn the analytical, critical thinking, and problem-solving skills required for program design, implementation, and evidence based decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3003 - Introduction to Nonprofit Organizations (3 Credits)
Explore the historical background, development, role, auspices, organization, and purposes of nonprofit agencies. Expand awareness of the scope and breadth of the nonprofit sector in the U.S., examine the inner workings of nonprofit organizations as the foundation for further study. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3004 - Managing Nonprofit Organizations (3 Credits)
Examine leadership and decision-making theory and practice in the nonprofit sector. Explore classic and contemporary theories on leadership, management, governance and organizational effectiveness of nonprofit organizations. Techniques for effective board meetings, committee work, development of board members, and policy development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3005 - Collaboration Across Sectors (3 Credits)
Organizations across sectors respond to complex problems with innovative and flexible responses through networks. Managing within and across organizations is essential to effective performance in a networked system. Explore collaborative governance across sectors--nonprofit, for-profit, and public--with analyses and applications. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3110 - Seminar in Nonprofit Management (3 Credits)
This course provides an overview of the principles and concepts that are unique to nonprofit management. Topics include executive management, funding diversity, human resource management, marketing, volunteer management and ethics. Students are also given an introduction to the history and the importance of the nonprofit sector. Cross-listed with PUAD 5110 and CRJU 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3400 - What Communities Tell Us: Stakeholders, Public Opinion, and Community Feedback (3 Credits)
Integrating community feedback into a strategy, message, and organizational feedback loops enhances leadership, keeps leaders connected to their communities, and can help drive decision making. This course examines various forms of publicly available opinion data, techniques for collecting stakeholder and community feedback, and the challenges and opportunities this feedback can present in public and nonprofit organizations. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3500 - Managing and Leading in Environmental Organizations (3 Credits)
Students will explore the intersections between management, science, regulations, policies, and sustainable programs, and issues associated with “being green.” Students will also consider the intersection of environmental laws with efforts by businesses, governments, NGOs, and other organizations to protect natural resources, build collaborations for effective environmental management, and the deep-seated value conflicts over the causes, or even the existence, of environmental problems and the appropriate solutions to address them. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3600 - International and Global Organizations (3 Credits)
Students will learn about the history of development paradigms and understand the relationships among development actors and how they address persistent global problems such as poverty, human trafficking, trade, education, health, and human rights, as examples. Students will understand the impact of colonialism and the finite resources available to address complex social issues in the developing world. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4000 - Human Resources and Ethics in Public Service (3 Credits)
Learn how managers in public sector organizations foster human capital and manage performance in a diverse, inclusive, and collaborative workforce. Understand ethics in public service, explore ethical concerns in public affairs, and confront ethical challenges in government and nonprofit organizations. Examine human resource law and case studies to apply ethical judgement to organizational decisions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4002 - Leading and Engaging for the Public Good (3 Credits)
Develop a personal leadership identity, tools for collaboration and stakeholder development, as well as work toward building an understanding of the interdependence of public and nonprofit organizations within communities. Investigate cultural competency, social justice, and your own citizenship skills. Look at issues related to leadership, personal ethics and values, motivation, change management, and teamwork. Students explore how stakeholders, networks, partnerships, and communities work together to achieve public goals. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4003 - Strategic Communications for Public Engagement (3 Credits)
Strategic communicators are needed in all fields, especially those that serve the public good. Grow in your abilities to demonstrate the value of government, educational, and non-profit organizations while driving positive engagement with diverse audience networks. Gain relevant professional writing, facilitation, presentation, social media, and crisis management skills to support your favorite institutions. Learn how to conduct situational and diverse audience analyses, solidify objectives, appreciate place branding, and craft messaging. Experience the excitement of executing the public communications function through guest speaker appearances, experiential outings and discussions, and hands-on activities. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4004 - Building Public and Financial Support for Nonprofit Organizations (3 Credits)
Examines methods, techniques, and directed experience in fundraising for nonprofit agencies. Explores relationships with umbrella organizations, government funding, grantsmanship, budget control, and accountability. Discusses social entrepreneurship and social innovation. Examines communications, marketing, and public relations intersection with resource development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4005 - Human Rights and Social Equity (3 Credits)
Achieving social equity is only possible through significant public policy, administration, leadership and managerial changes. This class explores the intersection between achieving social equity and efforts toward securing human rights. The course will cover local, state, and global challenges that public administrators face as they aim to address harms created by policy legacies. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4006 - Organizational Development (3 Credits)
Examine structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and service provision, and organizational strategy and effectiveness. Learn diagnostic and assessment tools, methods, and processes for improving organizational performance. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4007 - Nonprofit HR: Governance, Staff, Volunteer Management (3 Credits)
Current issues in human resource administration for employees of nonprofit organizations. Topics include such areas as recruitment, staff development, volunteer management, performance, evaluation, labor-management issues, and affirmative action. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4008 - Current Issues in Public Sector Organizations (3 Credits)
Explore the impact on public sector organizations of emergent issues such as globalization, changing demographics of the citizenry and workforce, sustainability, declining budgets, and information technology. Examine ways public sector organizations adapt to these trends. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4009 - Human Service Organizations (3 Credits)
Provides an overview of human services delivery in government and nonprofit organizations. Explore causes and conditions that give rise to the need for effective and equitable human service organizations. Learn essential skills including cultural competencies, boundaries, and collaboration. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4010 - Public Service in Emergency Management and Homeland Security (3 Credits)
Introduces emergency management and homeland security including: management of hazards, emergencies, disasters, and the networks of government and nonprofit organizations providing services. Focuses on principles of emergency management and homeland security at state and local jurisdictional levels. Cross-listed with PUAD 5650, CRJU 4010, and CRJU 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4011 - Community Resilience, Climate, and Emergency Response (3 Credits)
Climate change and disaster mitigation increasingly consumes time, energy and efforts of public and nonprofit leaders. This course, through an all-hazards approach, will guide students in understanding how communities can plan, prepare, respond and mitigate potential climate-related and mass casualty disasters. Through case studies and public sector agencies, students will explore techniques that can enhance community resilience, create partnerships across jurisdictions, and reduce risk. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4012 - Principles of Emergency Management (3 Credits)
Introduces the discipline and practice of emergency management. Topics include administrative practice and processes by which public policy shapes governmental responses to hazards, emergencies, and disasters. Cross-listed with PUAD 5655, CRJU 4012 and CRJU 5655. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4020 - Social Entrepreneurship (3 Credits)
Social entrepreneurship, practices, theories, and allied concepts. Using private, nonprofit, and government examples, explore innovation, creativity, profit for social welfare, and innovative management. Advance an organization’s social good mission, and increase effectiveness, accountability, and efficiency through market-based techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4140 - Nonprofit Financial Management (3 Credits)
Provides a grounding in financial management for the "non-accountant" by focusing on an array of knowledge and management skill areas necessary for allocating and controlling resources and for analyzing, reporting and protecting the fiscal health of the organization. Topics include key accounting principles, understanding and using financial statements, the budget development process, cash flow analysis, banking relationships, using the audit report, maximizing investment policy and strategy, and understanding the boundaries of tax exemption. Cross-listed with PUAD 5140 and CRJU 5140. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4145 - Philanthropy (3 Credits)
Today, the organized field of philanthropy and its companion field, impact investing, are growing at a remarkable speed. This course will explore the origins of philanthropy and impact investing and provide students with an in-depth understanding of how philanthropy works today and the nuances that exist among different forms of philanthropy and investment: individual giving, foundations, corporate philanthropy, and impact investing. It will also explore new trends among individual and institutional investors and unpack the different approaches that funders are taking to influence how services are delivered and the striking efforts to affect systems changes. Cross-listed with PUAD 5145. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4160 - Nonprofit Boards and Executive Leadership (3 Credits)
The important roles and responsibilities of a voluntary board of directors and the process of governing are often misunderstood. This course explores the special powers of a nonprofit board of directors as framed by and responsive to public policy. From the perspective of organizational behavior and theory, the course examines the leadership role and interplay between board members and the executive director. The examination includes a comparative analysis of different governing models, and explores fundamental questions of board composition, the role of advisor boards, achieving effective board meetings, the realm of liability, using committees, and the board's role in fundraising, among other special subject matter. Cross-listed with PUAD 5160. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4220 - Human Resource Management (3 Credits)
Covers human resource functions in public and nonprofit agencies. Topics include job analysis, compensation, recruiting, selection, rewarding, training and development. Contemporary issues concerning civil service reforms are also presented. Cross-listed with PUAD 5220. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4325 - Public Private Partnerships (3 Credits)
This course has been designed to introduce students to public private partnerships (PPPs) as a field of study and practice using Colorado as a laboratory for current practice, policy, strategy, management and finance. Students will engage current examples of PPPs as cases, learn and exchange in class presentations with guest lecturers currently leading PPPs and evaluate projects in class assignments doing research, analysis, and field interviews. Students will enhance their knowledge as well as skills commonly used in public, private, nonprofit and enterprise management and the public policy context and narrative of PPPs in international and U.S. practice. Cross-listed with PUAD 5325. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4440 - Negotiation and Conflict Resolution (3 Credits)
Focuses on concepts and skills necessary to negotiate policy and management decisions and manage internal and external conflicts. Designed to help students understand the dynamics that affect negotiations and to apply the principles and strategies of negotiation in a variety of decision making and dispute resolution contexts. Cross-listed with PUAD 5440. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4600 - Special Topics in Public Service (1-6 Credits)
This highly specialized seminar addresses cutting-edge and emerging developments in the field of public service and provides students and faculty with the opportunity to explore significant themes, issues and problems from a broad interdisciplinary perspective. Topics vary from semester to semester. Repeatable. Max hours: 18 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 18.

PUAD 4620 - Crisis and Emergency Communication (3 Credits)
This course examines strategic communication practices throughout the three stages of a crisis or emergency event. Special emphasis is placed on crisis planning, emergency messaging, media relationships, image restoration, ethical responses, and organizational learning. Cross-listed with PUAD 6620, COMM 4557, and COMM 5557. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PUAD 4628 - Social Problems and Policies in the Urban Environment (3 Credits)
Examines local government and nonprofit approaches to addressing common urban social problems. Topics covered may include urban poverty, crime, education, housing, and immigration. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4630 - Economic Development (3 Credits)
As governments search for new ways to be efficient, improve performance and leverage resources, they are also looking at their communities, states and regions in terms of competitiveness, international trade and globalization innovation, collaboration and partnerships. This course will look at practices where economic development includes these elements: the Colorado Innovation Network, the Colorado Office of Economic Development and International Trade, the Metro Denver and Denver South Economic Development Partnerships, Mile High Connects, the Downtown Denver Partnership, and public-private partnerships across multiple sectors in transportation, broadband, water and innovation. Students will develop an economic development strategy based on knowledge and tools learned in the course. Political and professional leadership will be part of the dialog. Cross-listed with PUAD 5630. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4633 - Economic Development (3 Credits)
As governments search for new ways to be efficient, improve performance and leverage resources, they are also looking at their communities, states and regions in terms of competitiveness, international trade and globalization innovation, collaboration and partnerships. This course will look at practices where economic development includes these elements: the Colorado Innovation Network, the Colorado Office of Economic Development and International Trade, the Metro Denver and Denver South Economic Development Partnerships, Mile High Connects, the Downtown Denver Partnership, and public-private partnerships across multiple sectors in transportation, broadband, water and innovation. Students will develop an economic development strategy based on knowledge and tools learned in the course. Political and professional leadership will be part of the dialog. Cross-listed with PUAD 5633. Max hours: 3 credits.
Grading Basis: Letter Grade

PUAD 4638 - Colorado Politics, Policy, and Administration (3 Credits)
This course focuses on the state-level policy-making process in Colorado, and how that process is affected by local, state, and federal politics, administration, and other policy-making constraints applicable to the state. Substantive topics covered will vary, but students will be exposed to a wide range of perspectives and experiences from practitioners and policy influencers engaged in state-level politics, policy-making, and administration. Cross-listed with PUAD 5638. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4740 - Sustainable Energy Policy (3 Credits)
This course will cover the basic principles and operation of policy and regulation that impact the production and use of energy (with a focus on transportation and electricity generation) from all of the major sources currently available and used. We will analyze (and, through a sustainability lens, critically evaluate) energy from water (hydroelectric, hydrokinetic), coal, domestic and international petroleum, natural gas and nuclear reactors. A significant portion of the course will focus on electricity generation and associated policy, technologies and regulation. In the context of each energy source and use, we will review and discuss sustainability practices, policies, and, issues. Cross-listed with PUAD 5740. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4840 - Independent Study (1-6 Credits)
This course consists of faculty-guided research in an area of mutual interest to the student and instructor. Students are responsible for selecting their area of inquiry prior to contacting the instructor. Permission of instructor is required. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PUAD 4939 - Public Service Internship (1-9 Credits)
The internship course, required for all Public Service majors unless waived, provides career-related experiential learning in a government agency or nonprofit organization. Students must apply to the internship course in the semester before they hope to enroll and obtain permission from their advisor and the instructor prior to enrolling. Prereq: PUAD 1001 plus any other 2000 level (or higher) PUAD course, a GPA of 2.0, and a minimum of 15 UCD credit hours completed. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PUAD 4941 - Integrating Professional Public Administration (3 Credits)
This is a student-directed, project-based course that allows the student to bring together their entire collegiate knowledge base into a project, program, thesis, or experience that will demonstrate how their public administration knowledge and expertise connects to their BAPA Core, concentration, thematic sequence, core University requirements, and personal goals. This course is intended for students in their final semester of the bachelor's degree. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4961 - Capstone (1-10 Credits)
Synthesizes competencies gained throughout the course of study into a client-based research project. Students conduct independent research, complete a final project demonstrating their qualifications and expertise. Restriction: Restricted to undergraduate students in the School of Public Affairs. Max hours: 10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Restriction: Restricted to undergraduate students in the School of Public Affairs.
Additional Information: Report as Full Time.

PUAD 4995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with PUAD 5995. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall.

Criminal Justice, BA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The School of Public Affairs' Bachelor of Arts in Criminal Justice (BACJ) program is designed for students who are interested in studying the American criminal justice system. Coursework in the major includes the complex nature of crime causation; the history, framework, and operations of criminal justice organizations; the implications of public policies related to crime and justice; and special topics such as capital punishment, victimology, race and crime, and community corrections. Students also receive rigorous training in research methods and statistics, allowing them to understand how to frame important questions and become critical consumers of information. Students may choose to focus their electives in Law Enforcement (p. 983), Victims and Victim Services (p. 984), earning concentrations in these areas, or they may use electives to study other criminal justice-related topics.

As with all undergraduate degrees at CU Denver, BACJ students will also complete the requirements of the CU Denver core curriculum, ensuring that they have a well-rounded liberal arts education. The critical thinking skills provided by the degree are important to any future career path, but BACJ students are particularly well-prepared for careers in criminal justice organizations such as local, state, and federal law enforcement and criminal justice agencies and nonprofit organizations working with people and communities affected by crime. Many graduates pursue advanced degrees in law, criminal justice, and related fields.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Major

- Please contact spa.advising@ucdenver.edu.
- Click here (p. 968) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The Bachelors of Arts in Criminal Justice degree requires 39 credit hours of coursework. Students must complete a minimum of 45 upper-division credit hours, 21 of which must be Criminal Justice credit hours.
2. A maximum of 15 transfer credits may be applied to the major. Transfer Criminal Justice credits above the 15 credits already applied to the major will count as general electives. CRJU courses taken from the University of Colorado, Colorado Springs are not subject to this transfer credit limit for the major.
3. Students must receive a minimum C- grade in each undergraduate course applied to satisfy major or minor degree requirements and must maintain a 2.0 GPA overall in major or minor courses.

Required Courses

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 3100	Research Methods	3
CRJU 3150	Statistics for Criminal Justice [1]	3
CRJU 4042	Corrections	3
CRJU 4043	Law Enforcement	3
CRJU 4044	Courts and Judicial Process	3
SOCY 1001	Understanding the Social World [2]	3
Elective Courses		
Select 15 credit hours of Elective Courses from the list (p. 981)		15
Total Hours		**39**

[1] Students must successfully pass CRJU 3100 Research Methods with a C- or better before taking CRJU 3150 Statistics for Criminal Justice

[2] This class also fulfills a Social Science requirement of the CU Denver core curriculum

Elective Courses

Code	Title	Hours
Required Elective		
CRJU 4939	Internship [1]	1-9
Other Electives [2]		
ANTH 4090	Psychedelic Anthropology	3
CHEM 1494	Forensic Chemistry	4
COMM 3231	Famous U.S. Trials	3
COMM 4040	Communication, Prisons, and Social Justice	3
COMM 4265	Gender and Communication	3
COMM 4750	Legal Reasoning and Writing	3
HDFR 4075	Family Policy & Law	3
HIST 4308	Crime, Policing, and Justice in American History	3
ECON 3300	Economics of Crime and Punishment	3
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4090	Helping Profession Skills in HDFR	3
HDFR 4260	Family Systems and Social Justice	3
GEOG 2080	Introduction to Mapping and Map Analysis	3
GEOG 4080	Introduction to GIS	3
PSCI 3034	Race, Gender, Law and Public Policy	3
PSCI 4124	Denver Politics	3
PSCI 4185	Corruption in the U.S. and Abroad	3
PSCI 4216	International Politics: Human Rights	3
PSCI 4237	American National Security	3
PSCI 4240	International Security	3

PSCI 4280	The Politics of War Law	3
PSCI 4427	Law, Politics and Justice	3
PSCI 4477	Constitutional Law I	3
PSCI 4487	Constitutional Law II	3
PSCI 4494	Judicial Politics	3
PSCI 4545	Immigration Politics	3
PSCI 4807	Political Violence	3
PSCI 4827	Women and the Law	3
PSCI 4837	Contemporary Issues in Civil Liberties	3
PSYC 3205	Human Development I: Child Psychology	3
PSYC 3215	Human Development II: Adolescence and Adulthood	3
PSYC 3265	Drugs, Brain and Behavior	3
PSYC 3305	Abnormal Psychology	3
PSYC 3505	Psychology and the Law	3
PSYC 3612	Domestic Abuse	3
PUAD 4002	Leading and Engaging for the Public Good	3
PUAD 4009	Human Service Organizations	3
SOCY 2440	Deviance and Social Control	3
SOCY 2462	Introduction to Social Psychology	3
SOCY 3020	Race and Ethnicity in the U.S.	3
SOCY 3040	Drugs, Alcohol & Society	3
SOCY 3490	Criminology	3
SOCY 3700	Families and Society	3
SOCY 4340	Juvenile Delinquency	3
SOCY 4440	Poverty and Social Inequality	3
SOCY 4460	Hate Groups and Group Violence	3
SOCY 4700	Sociology of Law	3
SOCY 4770	Advanced Topics in Sociology	3
SOCY 4780	Violence in Relationships	3
See advisor for recent additions to the list.		

[1] CRJU 4939 Internship is required as one of the electives for the major unless officially waived by the BACJ Program Director. The internship is a minimum of 3 credit hours. Students who have previous professional work experience in the criminal justice field may request a waiver of the internship requirement. In addition, international students may also have their internship waived. Students whose internship waivers are approved will take a 3-credit-hour Criminal Justice elective in place of a 3-credit-hour internship. Students should direct questions and concerns to their Academic Advisor. See SPA Graduation Requirements (p. 967) for more information.

[2] Students must complete 15 credit hours of electives, 9 credit hours of which must be Criminal Justice courses offered by the School of Public Affairs, and 6 credit hours of which must be taken from the approved list of other department courses.Students must comply with departmental prerequisites. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/spa/)

Criminal Justice - Law Enforcement Concentration, BA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

Students interested in obtaining a concentration in Law Enforcement within the Bachelor of Arts in Criminal Justice (p. 981) (BACJ) program must apply and enroll in the BACJ program within the School of Public Affairs and must adhere to all of the degree program requirements.

The undergraduate concentration in Law Enforcement provides a detailed, comprehensive, and advanced education in the field of law enforcement. The program is designed to meet the needs of students who wish to work in law enforcement or who are currently working in the field and would like to enrich their professional development.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of law enforcement that students can apply to their current or future careers in the field.

Students completing the Law Enforcement concentration will have the knowledge and skills to evaluate and respond to a variety of situations in law enforcement professions that require technical, analytic, substantive, and ethical decision-making. They will understand the different environments and contexts in which law enforcement carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Major

- Please contact spa.advising@ucdenver.edu.
- Click here (p. 968) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. A concentration in Law Enforcement requires 12 credit hours of course work.
2. A maximum of 6 transfer credits may be applied to the concentration.
3. Students must receive a minimum C- grade in each undergraduate course applied to satisfy the concentration requirements.

Code	Title	Hours
Required Courses		
CRJU 4540	Evidence-Based Approaches in Law Enforcement	3
Elective Courses		
Select from nine credits from the following two categories		9
Topic Area		
Select (p. 983)**two** courses from the Topic Area list		
Professional Skills		
Select (p. 983)**one** course from the Professional Skills list		
Total Hours		**12**

Program Electives

There are two elective categories, Topic Area and Professional Setting. The Topic Area electives allows the student to explore a different aspect of law enforcement. The Professional Skills elective allows the student to hone skills related to law enforcement.

Topic Area

Code	Title	Hours
CRJU 3310	Contemporary Issues in Law Enforcement	3
CRJU 3320	Police-Community Relations	3
CRJU 3520	Juvenile Justice	3
CRJU 3530	Juvenile Delinquency	3
CRJU 4014	Federal Wildlife and Fisheries Investigations	3
CRJU 4410	Criminal Law and Constitutional Procedures	3
CRJU 4430	Law and Society	3
CRJU 4450	Homeland Security	3
PSCI 4427	Law, Politics and Justice	3
SOCY 4340	Juvenile Delinquency	3
SOCY 4700	Sociology of Law	3
Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment. A law enforcement-related internship may fulfill this category. Students should work with their academic advisor to receive approval.		

Professional Skills

Code	Title	Hours
CRJU 4310	Leadership Roles in Criminal Justice	3
CRJU 4331	Crime Analysis and GIS	3
CSCI 1001	Computer Forensics I	3
GEOG 2080	Introduction to Mapping and Map Analysis	3
GEOG 4080	Introduction to GIS (pre-req GEOG 2080)	3
Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.		

To review the Degree Map for this program, please visit our website (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/spa/).

Criminal Justice - Victims and Victim Services Concentration, BA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

Students interested in obtaining a concentration in Victims and Victim Services within the Bachelor of Arts in Criminal Justice (p. 981) (BACJ) program must apply and enroll in the BACJ program within the School of Public Affairs and must adhere to all of the degree program requirements.

The undergraduate concentration in Victims and Victim Services provides a detailed, comprehensive, and advanced education in fields related to victims and victim services. The program is designed to meet the needs of students who wish to work in fields related to victim services or who are currently working in this field and would like to enrich their professional development.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of victims and victim services that students can apply to their current or future careers in the field.

Students completing the Victims and Victim Services concentration will have the knowledge and skills to evaluate, manage, and respond to a variety of situations and issues that professionals in fields related to victims and victim services face. Specifically, they will possess technical, analytic, substantive, and ethical proficiencies that will facilitate their professional interactions and development. They will understand the different environments and contexts in which victim advocates and other professionals in this and related fields carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Major

- Please contact spa.advising@ucdenver.edu.
- Click here (p. 968) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. A concentration in Victims and Victim Services requires 12 semester hours of coursework.
2. A maximum of 6 transfer credits may be applied to the concentration.
3. Students must receive a minimum of C- grade in each undergraduate course applied to satisfy the certificate requirements.

Code	Title	Hours
Required Courses		
CRJU 4170	Victimology	3
CRJU 3285	Trauma in the Criminal Justice System	3
Elective Courses		
Select one course from each of the following categories:		6
Victims Focus		
Select (p.	)**one** course from the Victims Focus list	
Professional Setting		
Select (p. 984)	**one** course from the Professional Setting list	
Total Hours		**12**

Program Electives

There are two elective categories, Victims Focus and Professional Setting. The Victims Focus elective allows the student to learn about an area of violence in a more in-depth capacity. The Professional Setting electives allows the student to hone skills related to service delivery.

Victims Focus

Code	Title	Hours
CRJU 3250	Violence in Society	3
CRJU 3280	Trauma Among Correctional Populations	3
CRJU 3290	Capital Punishment	3
CRJU 4140	Interpersonal Violence	3
CRJU 4150	Sex Offenders and Offenses	3
CRJU 4600	Special Topics in Criminology and Criminal Justice (Fatal Violence Against Indigenous Women)	1-6
CRJU 4600	Special Topics in Criminology and Criminal Justice (Human Trafficking)	1-6
CRJU 4600	Special Topics in Criminology and Criminal Justice (Juvenile Violence)	1-6
HDFR 1080	Lifespan Issues in Family Violence	3
HIST 4308	Crime, Policing, and Justice in American History	3
PSCI 4807	Political Violence	3
PSYC 3611	Psychology of Women	3
SOCY 4460	Hate Groups and Group Violence	3
SOCY 4780	Violence in Relationships	3

Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

Professional Setting

Code	Title	Hours
CRJU 4310	Leadership Roles in Criminal Justice	3
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4090	Helping Profession Skills in HDFR	3
HDFR 4260	Family Systems and Social Justice	3

HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4002	Leading and Engaging for the Public Good	3
PUAD 4009	Human Service Organizations	3

Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment. A victims- or victim services-related internship may fulfill this category. Students should work with their academic advisor to receive approval.

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/spa/)

Criminal Justice, BA/MCJ

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The Pathways Bachelor of Arts in Criminal Justice (BACJ)/Master of Criminal Justice (MCJ) degree allows high-performing students to earn both degrees in an accelerated time frame. Both the BACJ and the MCJ degrees are offered fully online, providing students with the flexibility to schedule courses around family and work demands while engaging criminal justice opportunities in their own communities.

The BACJ/MCJ degree program offered by the School of Public Affairs allows high-performing students to count 12 credit hours towards both the BACJ and the MCJ degrees. Eligible students will have completed at least 75 credits with a minimum 3.5 grade point average (GPA) in the BACJ major and a 3.0 overall GPA, completed the undergraduate Core Curriculum, and met all other requirements listed below.

Students are eligible to receive the BACJ degree once they have successfully completed 120 semester hours and all CU Denver undergraduate degree requirements. The MCJ will be conferred once the student has completed all degree requirements.

Pathways Application

Both current CU Denver BACJ majors and new transfer students are eligible to apply to the Pathways BACJ/MCJ program after meeting the following criteria:

- Currently enrolled in the School of Public Affairs as an undergraduate Criminal Justice major
- Completed the University of Colorado Denver's undergraduate core curriculum
- Completed at least 60 undergraduate credit hours
- Completed the following 12 credit hours in Criminal Justice or have an approved plan for enrolling in each class:

Code	Title	Hours
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 3100	Research Methods	3
CRJU 3150	Statistics for Criminal Justice	3
Total Hours		**12**

- All transfer courses must have been approved and accepted towards the major and degree at the time of application
- Minimum 3.0 cumulative GPA
- Minimum 3.5 cumulative GPA in the Criminal Justice major

Students will work with their assigned undergraduate academic advisor to apply for the Pathways program after they have already matriculated to the university and have met the stated criteria. Students do not apply for the Pathways program at the time of application to CU Denver.

BACJ/MCJ Program Matriculation

Students admitted to the Pathways BACJ/MCJ program will work with their assigned undergraduate academic advisor to enroll in MCJ-level courses each semester. Students can complete up to 6 credit hours of MCJ coursework per semester as an undergraduate and a maximum total of 12 graduate semester credits as an undergraduate BACJ/MCJ student overall. Students will continue to take undergraduate coursework while also completing graduate-level coursework.

Students in the Pathways BACJ/MCJ program may be eligible to complete the MCJ-level internship only after successfully passing two MCJ-level courses. The MCJ-level internship may fulfill both the BACJ and MCJ internship requirement. The BACJ-level internship will not fulfill the MCJ-level internship. Students must maintain a minimum 3.0 cumulative GPA for all coursework and a 3.5 GPA for the BACJ major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. Students must complete all CU Denver, School of Public Affairs, and Criminal Justice degree requirements to earn their Bachelor of Arts in Criminal Justice degree. The Bachelor of Arts in Criminal Justice is conferred once students meet all degree requirements.
2. Students seek full admission to the Master of Criminal Justice program during their final semester as an undergraduate student. This application is different than the one used to apply for the Pathways program. Students must receive a minimum of a B- grade in each required core MCJ course, whether taken as an undergraduate or a graduate student.
3. Students must maintain a 3.0 GPA overall in all graduate-level courses.
4. Students in the MCJ program must successfully complete the MCJ capstone or thesis.
5. Students must fulfill all college/school and major/program requirements.
6. The MCJ will be conferred once the student has completed all requirements of the Master of Criminal Justice degree.
7. The School of Public Affairs reserves the right to rescind a BACJ/MCJ student's admittance to the Pathways program if at any point the student's GPA falls below the requirements listed above.

Public Administration, BA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

Our graduates have a passion for helping people and making the world a better place. The Bachelor of Arts in Public Administration (BAPA), offered by the School of Public Affairs, prepares the next generation of civic-minded leaders to take active roles in organizations that promote the common good, such as local, state, and federal government agencies and nonprofit and nongovernmental organizations. We build on this passion, in concert with your work and life experiences, to encourage and develop learning opportunities where we examine how systems, institutions, communities, and organizations influence social or policy change. Public Administration degrees allow students to engage with communities in building their future. Specifically, we prioritize commitments to public and social issues, develop the capacity for organizations to help individuals reach their goals, and allow you to hone your own skills for leadership, management, collaboration, budgeting, and evaluation. Coursework explores the history and values of public service, while building real-world skills in areas such as managing people and resources, designing and evaluating programs, conducting human resources functions, collaborating with others and across sectors, making ethical decisions and communicating effectively in diverse environments. Students interested in careers in nonprofit organizations may choose to earn a concentration in Nonprofit Management.

All courses are available online, and many are also offered in person on campus. The program provides students with the flexibility to schedule courses around the reality of family and work demands while also engaging both local and fully online students in public service opportunities in their own communities. The BAPA program has been ranked #9 overall by SR Education Group's 2018 Best and Most Affordable Online Colleges, based upon a mix of #3 for quality and #22 for affordability.

Program Delivery

- Most courses are offered online, although others may be offered on campus and in remote and hybrid formats.

Declaring This Major

- Please contact spa.advising@ucdenver.edu
- Click here (p. 968) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. The Public Administration major requires 48 credit hours of coursework, a minimum of which 39 must be PUAD credit hours offered by the School of Public Affairs. Up to 9 credit hours of electives outside of PUAD coursework may be applied to major requirements with advisor approval.
2. A maximum of 12 transfer credits may be applied to the major.
3. Students must receive a minimum C- grade in each undergraduate course applied to satisfy major or minor degree requirements and must maintain a 2.0 GPA overall.

Code	Title	Hours
Required Courses		
PUAD 1001	Why You Should Care About Government: Public Service and Administration [1]	3
PUAD 2002	Policy and Advocacy	3
PUAD 3001	Project Management and Program Evaluation	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 3600	International and Global Organizations	3
PUAD 4000	Human Resources and Ethics in Public Service	3
PUAD 4002	Leading and Engaging for the Public Good	3
PUAD 4003	Strategic Communications for Public Engagement	3
PUAD 4011	Community Resilience, Climate, and Emergency Response	3
PUAD 4939	Public Service Internship [2]	3
PUAD 4941	Integrating Professional Public Administration	3
Elective Courses		
Students must take a total of 15 credit hours of elective courses. A maximum of 9 credit hours of electives can be taken outside of Public Administration electives if approved.		15
Total Hours		**48**

[1] This class also fulfills a Social Science requirement of the CU Denver core curriculum.

[2] The internship requirement may be waived by the BAPA program director in the case of prior significant professional public service experience, in which case an additional elective is required. See SPA Graduation Requirements (p. 967) for more information.

Public Administration Electives

Code	Title	Hours
PUAD 1000	Public Service Online Success and Career Exploration	1
PUAD 3005	Collaboration Across Sectors	3
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 3500	Managing and Leading in Environmental Organizations	3
PUAD 3600	International and Global Organizations	3
PUAD 4006	Organizational Development	3
PUAD 4008	Current Issues in Public Sector Organizations	3
PUAD 4009	Human Service Organizations	3
PUAD 4010	Public Service in Emergency Management and Homeland Security	3
PUAD 4012	Principles of Emergency Management	3
PUAD 4020	Social Entrepreneurship	3
PUAD 4140	Nonprofit Financial Management	3
PUAD 4145	Philanthropy	3

PUAD 4160	Nonprofit Boards and Executive Leadership	3
PUAD 4220	Human Resource Management	3
PUAD 4325	Public Private Partnerships	3
PUAD 4440	Negotiation and Conflict Resolution	3
PUAD 4600	Special Topics in Public Service	1-6
PUAD 4630	Economic Development	3
PUAD 4638	Colorado Politics, Policy, and Administration	3
PUAD 4740	Sustainable Energy Policy	3
PUAD 4995	Global Study Topics	3

Special Topics courses include Study Abroad in East Africa in addition to other topics, and new courses are frequently added. Please consult your advisor for any other PUAD course you are considering as an elective in advance of enrolling in the course.

Other Electives

All courses taken from another department that you would like to count as an elective for the Public Administration major must be approved by your advisor in advance. Please contact your advisor directly to discuss any class you may be considering for elective credit that is not listed above.

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/spa/)

Public Administration - Nonprofit Management Concentration, BA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The Nonprofit Management concentration within the Bachelor of Arts in Public Administration (p. 987) (BAPA) degree program prepares students for a wide variety of careers in the exciting world of nonprofit organizations. Students learn about the history and context of nonprofit organizations while gaining practical skills needed to manage and lead in this sector. The School of Public Affairs' affiliation with the Nonprofit Leadership Alliance gives students the opportunity to earn the nationally recognized Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) credential.

Program Delivery

- Most courses are offered online, although others may be offered on campus and in remote and hybrid formats.

Declaring This Concentration

- Please contact spa.advising@ucdenver.edu
- Click here (p. 968) to go to information about declaring a major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. A concentration in Nonprofit Management requires 15 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the concentration.
3. A minimum grade of C- must be earned in each undergraduate course applied to satisfy the concentration requirements.

Code	Title	Hours
Required Courses		
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4140	Nonprofit Financial Management	3
Elective Courses		
Select three courses from the following:		9
PUAD 3005	Collaboration Across Sectors	
PUAD 4004	Building Public and Financial Support for Nonprofit Organizations	
PUAD 4006	Organizational Development	
PUAD 4007	Nonprofit HR: Governance, Staff, Volunteer Management	
PUAD 4009	Human Service Organizations	
PUAD 4020	Social Entrepreneurship	
PUAD 4145	Philanthropy	
PUAD 4160	Nonprofit Boards and Executive Leadership	
PUAD 4600	Special Topics in Public Service (Study Abroad in East Africa)	
PUAD 4628	Social Problems and Policies in the Urban Environment	
Any other approved School of Public Affairs nonprofit elective		
Total Hours		**15**

Certified Nonprofit Professional Credential

Students completing the Nonprofit Management concentration may choose to simultaneously earn the national Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) credential from the Nonprofit Leadership Alliance by completing additional extracurricular requirements and an examination. Contact cnp@ucdenver.edu for more information.

To review the Degree Map for this program, please visit our website. (https://www.ucdenver.edu/student/advising/undergraduate/degree-maps/spa/)

Public Administration, BA/MPA

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The Pathways Bachelor of Arts in Public Administration (BAPA)/Master of Public Administration (MPA) degree allows high-performing students to earn both degrees in an accelerated time frame, saving students both time and money. Students graduating with the Pathway BAPA/MPA degree are prepared for leadership and management roles in public service, including local, state, and federal governmental agencies and in nonprofit and nongovernmental organizations. Both the BAPA and the MPA degrees are offered fully online, providing students with the flexibility to schedule courses around the reality of family and work demands while also engaging both local and fully online students in public service opportunities in their own communities.

The BAPA/MPA degree program offered by the School of Public Affairs allows high-performing students to count 12 credit hours towards both the BAPA and the MPA degrees. Eligible students are those who have completed at least 75 credits with a minimum 3.5 grade point average (GPA) in the BAPA major and a 3.0 overall GPA, completed the undergraduate Core Curriculum, and who meet the other requirements listed below.

Students are eligible to receive the BAPA degree once they have successfully completed 120 semester hours and all CU Denver undergraduate degree requirements. The MPA will be conferred once the student has completed all requirements of the MPA degree.

Pathways Application

Both current CU Denver BAPA majors and new transfer students are eligible to apply to the Pathways BAPA/MPA program after meeting the following criteria:

- Currently enrolled in the School of Public Affairs as an undergraduate Public Administration major
- Completed the University of Colorado Denver's undergraduate core curriculum
- Completed at least 75 undergraduate credit hours
- Completed the following 15 credit hours in Public Administration or have a plan on when they will take each class:

Code	Title	Hours
PUAD 1001	Why You Should Care About Government: Public Service and Administration	3
PUAD 2001	Management for Public Service	3
PUAD 3001	Project Management and Program Evaluation	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 4000	Human Resources and Ethics in Public Service	3
Total Hours		**15**

- All transfer courses must have been approved and accepted towards the major and degree at the time of application
- Minimum 3.0 cumulative GPA
- Minimum 3.5 cumulative GPA in the Public Administration major

Students do not apply for the Pathways program at the time of application to CU Denver. Students will work with their assigned undergraduate academic advisor to apply for the Pathways program after they have already matriculated to the university and have met the stated criteria.

BAPA/MPA Program Matriculation

After a student is admitted to the Pathways BAPA/MPA program, they will work with their assigned undergraduate academic advisor to enroll in MPA-level courses each semester. Students can complete up to 6 credit hours of MPA coursework each semester as an undergraduate and a maximum of 12 graduate semester credits can be completed as an undergraduate BAPA/MPA student overall. Students will continue to take undergraduate coursework while also completing graduate-level coursework.

Students in the Pathways BAPA/MPA program may be eligible to complete the MPA-level internship only after successfully passing two MPA-level courses. The MPA-level internship may fulfill both the BAPA and MPA internship requirement. The BAPA-level internship will not fulfill the MPA-level internship. Students must maintain a minimum 3.0 cumulative GPA for all course work and a 3.5 GPA for the BAPA major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete all CU Denver, School of Public Affairs, and Public Administration degree requirements to earn their Bachelor of Arts in Public Administration degree. The Bachelor of Arts in Public Administration is conferred once students meets all degree requirements.
2. Students seek full admission to the Master of Public Administration program during their final semester as an undergraduate student. This application is different than the one used to apply for the Pathways program. Students must receive a minimum of a B- grade in each required core MPA course, whether taken as an undergraduate or a graduate student.
3. Students must maintain a 3.0 GPA overall in all graduate-level courses.
4. In the MPA program students must successfully complete the MPA capstone or thesis.
5. Students must fulfill all college and major requirements.
6. The MPA will be conferred once the student has completed all requirements of the Master of Public Administration degree.
7. The School of Public Affairs reserves the right to rescind a BAPA/MPA student's admittance to the Pathways program if at any point the student's GPA falls below the requirements listed above.

Public Administration, BA/Master of Public Policy

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The Pathways Bachelor of Arts in Public Administration (BAPA)/Master of Public Policy (MPP) degree allows high-performing students to earn both degrees in an accelerated time frame, saving students both time and money. Students graduating with the Pathways BAPA/MPP degree receive a solid grounding in the context and management of public service organizations and the knowledge and skills needed to design, advocate for, and analyze public policies relevant to those organizations and the larger democratic society. Both the BAPA and the MPP degrees are offered fully online, providing students with the flexibility to schedule courses around the reality of family and work demands while also engaging both local and fully online students in public service opportunities in their own communities.

The BAPA/MPP degree program offered by the School of Public Affairs allows high-performing students to count 12 credit hours towards both the BAPA and the MPP degrees. Eligible students are those who have completed at least 75 credits with a minimum 3.5 GPA in the BAPA major and a 3.0 overall GPA, completed the undergraduate Core Curriculum, and who meet the other requirements listed below.

Students are eligible to receive the BAPA degree once they have successfully completed 120 semester hours and all CU Denver undergraduate degree requirements. The MPP will be conferred once the student has completed all requirements of the MPP degree.

Pathways Application

Both current CU Denver BAPA majors and new transfer students are eligible to apply to the Pathways BAPA/MPP program after meeting the following criteria:

- Currently enrolled in the School of Public Affairs as an undergraduate Public Administration major
- Completed the University of Colorado Denver's undergraduate core curriculum
- Completed at least 75 undergraduate credit hours
- Completed the following 15 credit hours in Public Administration or have a plan on when they will take each class:

Code	Title	Hours
PUAD 1001	Why You Should Care About Government: Public Service and Administration	3
PUAD 2001	Management for Public Service	3
PUAD 3001	Project Management and Program Evaluation	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 4000	Human Resources and Ethics in Public Service	3
Total Hours		**15**

- All transfer courses must have been approved and accepted towards the major and degree at the time of application
- Minimum 3.0 cumulative GPA
- Minimum 3.5 cumulative GPA in the Public Administration major

Students do not apply for the pathway program at the time of application to CU Denver. Students will work with their assigned undergraduate academic advisor to apply for the pathway program after they have already matriculated to the university and have met the stated criteria.

BAPA/MPP Program Matriculation

After a student is admitted to the Pathways BAPA/MPP program, they will work with their assigned undergraduate academic advisor to enroll in MPP-level courses each semester. Students can complete up to 6 credit hours of MPP coursework each semester as an undergraduate and a maximum of 12 graduate semester credits can be completed as an undergraduate BAPA/MPA student overall. Students will continue to take undergraduate coursework while also completing graduate-level coursework.

Students in the Pathways BAPA/MPP program may be eligible to complete the MPP-level internship only after successfully passing two MPP-level courses. The MPP-level internship may fulfill both the BAPA and MPP internship requirement. The BAPA-level internship will not fulfill the MPP-level internship. Students must maintain a minimum 3.0 cumulative grade point average for all course work and a 3.5 grade point average for the BAPA major.

General Requirements

To earn a degree, students must satisfy all requirements in each of the three areas below, in addition to their individual major requirements.

- CU Denver Graduation Requirements (p. 126)
- CU Denver Undergraduate Core Curriculum (p. 122)
- School of Public Affairs Graduation Requirements (p. 967)
- Click here (p. 109) for information about Academic Policies

Program Requirements

1. Students must complete all CU Denver, School of Public Affairs, and Public Administration degree requirements to earn their Bachelor of Arts in Public Administration degree. The Bachelor of Arts in Public Administration is conferred once students meets all degree requirements.
2. Students seek full admission to the Master of Public Policy program during their final semester as an undergraduate student. This application is different than the one used to apply for the pathway program. Students must receive a minimum of a B- grade in each required core MPP course, whether taken as an undergraduate or a graduate student.
3. Students must maintain a 3.0 GPA overall in all graduate-level courses.
4. In the MPP program students must successfully complete the MPP capstone or thesis.
5. Students must fulfill all college and major requirements.
6. The MPP will be conferred once the student has completed all requirements of the Master of Public Policy degree.
7. The School of Public Affairs reserves the right to rescind a BAPA/MPP student's admittance to the pathways program if at any point the student's grade point average falls below the requirements listed above.

Criminal Justice Minor

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The minor in Criminal Justice will provide students with foundational knowledge of criminology and criminal justice. Students majoring in sociology, psychology, political science, and related fields are likely to interact with the criminal justice system in their careers and would benefit from the addition of the Criminal Justice minor to their degree plan.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Minor

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the school offering the minor.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The minor in Criminal Justice requires 18 credit hours of coursework.
2. A maximum of 9 transfer credits may be applied to the minor.
3. Students must receive a minimum C- grade in each course applied to satisfy the minor requirements.

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
Select two of the following:		*6*
CRJU 4042	Corrections	
CRJU 4043	Law Enforcement	
CRJU 4044	Courts and Judicial Process	
Elective Courses		**6**
Select two additional upper-division elective courses in Criminal Justice.		
Total Hours		**18**

Law Enforcement Minor

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The minor in Law Enforcement provides a detailed, comprehensive, and advanced education in the field of law enforcement. This program is designed for students who are employed or will work in the field of law enforcement.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of law enforcement that students can apply to their current or future careers in the field.

Students completing the Law Enforcement minor will have the knowledge and skills to evaluate and respond to a variety of situations in law enforcement professions that require technical, analytic, substantive, and ethical decision-making. They will understand the different environments and contexts in which law enforcement carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Minor

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The minor in Law Enforcement requires 18 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the minor.
3. Students must receive a minimum C- grade in each course applied to satisfy the minor requirements.

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 4043	Law Enforcement	3
CRJU 4540	Evidence-Based Approaches in Law Enforcement	3
Elective Courses		**6**
Select one course from each of the following categories:		
Topic Area		
Select (p. 993)**one** course from the Topic Area list		
Professional Skills		
Select (p. 993)**one** course from the Professional Skills list		
Total Hours		**18**

Program Electives

There are two elective categories, Topic Area and Professional Setting. The Topic Area elective allows the student to explore a different aspect of law enforcement. The Professional Skills elective allows the student to hone skills related to law enforcement.

Topic Area

Code	Title	Hours
CRJU 3310	Contemporary Issues in Law Enforcement	3
CRJU 3320	Police-Community Relations	3
CRJU 3520	Juvenile Justice	3
CRJU 3530	Juvenile Delinquency	3
CRJU 4014	Federal Wildlife and Fisheries Investigations	3
CRJU 4410	Criminal Law and Constitutional Procedures	3
CRJU 4430	Law and Society	3
CRJU 4450	Homeland Security	3
PSCI 4427	Law, Politics and Justice	3
SOCY 4340	Juvenile Delinquency	3
SOCY 4700	Sociology of Law	3
Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.		

Professional Skills

Code	Title	Hours
CRJU 3100	Research Methods	3
CRJU 3150	Statistics for Criminal Justice	3
CRJU 4310	Leadership Roles in Criminal Justice	3
CRJU 4331	Crime Analysis and GIS	3
CRJU 4600	Special Topics in Criminology and Criminal Justice	1-6
CRJU 4939	Internship (must be related to Law Enforcement and must be pre-approved)	1-9
CSCI 1001	Computer Forensics I	3
GEOG 2080	Introduction to Mapping and Map Analysis	3
GEOG 4080	Introduction to GIS (pre-req GEOG 2080)	3
Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.		

Nonprofit Management Minor

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The minor in Nonprofit Management is expected to be popular with students from fields in which nonprofit organizations play a significant role such as psychology, public health, arts and culture, environmental studies, education and human development, and ethnic studies. Through this minor, a student can focus on the fundamentals of nonprofit management and may also choose to earn the Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) credential through the Nonprofit Leadership Alliance.

Program Delivery

- All courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Minor

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. The minor in Nonprofit Management requires 15 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the minor.
3. Students must receive a minimum C- grade in each course applied to satisfy the minor requirements.

Code	Title	Hours
Required Courses		
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4140	Nonprofit Financial Management	3
Elective Courses		**9**
Select **three** courses from the following:		
PUAD 3005	Collaboration Across Sectors	
PUAD 4020	Social Entrepreneurship	
PUAD 4600	Special Topics in Public Service (Study Abroad in East Africa)	
PUAD 4628	Social Problems and Policies in the Urban Environment	
Any other approved School of Public Affairs nonprofit elective		
Total Hours		**15**

Certified Nonprofit Professional Credential

Students completing the Nonprofit Management minor may choose to simultaneously earn the national Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) credential from the Nonprofit Leadership Alliance by completing additional extracurricular requirements and an examination. Contact cnp@ucdenver.edu for more information.

Public Administration Minor

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The minor in Public Administration, offered by the School of Public Affairs, will provide needed competencies to a generation looking for meaningful work consistent with their values. Public Administration courses provide students with the skills and content knowledge to work in public, private, and nonprofit sectors and the emerging fourth sector that blends social concerns with business approaches. This minor is particularly useful for students majoring in substantive areas (such as environmental studies, education and human development, and criminal justice) who plan on applying their expertise in public service organizations such as governmental agencies or nonprofit organizations.

Program Delivery

- Most courses are offered online, although others may be offered on campus and in remote and hybrid formats.

Declaring This Minor

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. The minor in Public Administration requires 15 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the minor.
3. Students must receive a minimum C- grade in each course applied to satisfy the minor requirements.

Code	Title	Hours
Required Course		
PUAD 1001	Why You Should Care About Government: Public Service and Administration	3
Elective Courses		**12**
Select **six** elective credit hours of Public Administration core required courses offered by the School of Public Affairs		
Students may choose from the following courses as well as other approved courses.		
PUAD 2001	Management for Public Service	
PUAD 3001	Project Management and Program Evaluation	
PUAD 3002	Organizational and Strategic Management	
PUAD 4000	Human Resources and Ethics in Public Service	
PUAD 4002	Leading and Engaging for the Public Good	
PUAD 4003	Strategic Communications for Public Engagement	
Select **six** elective credit hours of upper-division Public Administration electives offered by the School of Public Affairs		
Total Hours		**15**

Victims and Victim Services Minor

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The minor in Victims and Victim Services provides a detailed, comprehensive, and advanced education in fields related to victims and victim services. This program is designed for students who are employed or plan to work in a field related to victim services.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of victims and victim services that students can apply to their current or future careers in the field.

Students completing the Victims and Victim Services minor will have the knowledge and skills to evaluate, manage, and respond to a variety of situations and issues that professionals in fields related to victims and victim services face. Specifically, they will possess technical, analytic, substantive, and ethical proficiencies that will facilitate their professional interactions and development. They will understand the different environments and contexts in which victim advocates and other professionals in this and other related fields carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Minor

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The minor in Victims and Victim Services requires 18 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the minor.
3. Students must receive a minimum C- grade in each undergraduate course applied to satisfy the minor requirements.

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 3285	Trauma in the Criminal Justice System	3
CRJU 4170	Victimology	3
Elective Courses		**6**
Select one course from each of the following categories:		
Victims Focus		
Select (p.	)**one** course from the Victims Focus list	
Professional Setting		
Select (p.	)**one** course from the Professional Setting list	
Total Hours		**18**

Program Electives

There are two elective categories, Victims Focus and Professional Setting. The Victims Focus elective allows the student to learn about an area of violence in a more in-depth capacity. The Professional Setting elective allows the student to hone skills related to service delivery.

Victims Focus

Code	Title	Hours
CRJU 3250	Violence in Society	3
CRJU 3280	Trauma Among Correctional Populations	3
CRJU 3290	Capital Punishment	3
CRJU 4140	Interpersonal Violence	3
CRJU 4150	Sex Offenders and Offenses	3
CRJU 4600	Special Topics in Criminology and Criminal Justice (Fatal Violence Against Indigenous Women)	1-6
PUAD 4600	Special Topics in Public Service (Juvenile Violence)	1-6
CRJU 4600	Special Topics in Criminology and Criminal Justice (Human Trafficking)	1-6
HDFR 1080	Lifespan Issues in Family Violence	3
HIST 4308	Crime, Policing, and Justice in American History	3
PSCI 4807	Political Violence	3
PSYC 3611	Psychology of Women	3
SOCY 4460	Hate Groups and Group Violence	3
SOCY 4780	Violence in Relationships	3

Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

Professional Setting

Code	Title	Hours
CRJU 4310	Leadership Roles in Criminal Justice	3
CRJU 4939	Internship (must be related to Victims and Victim Services and must be pre-approved)	1-9
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4090	Helping Profession Skills in HDFR	3
HDFR 4260	Family Systems and Social Justice	3
HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4002	Leading and Engaging for the Public Good	3
PUAD 4009	Human Service Organizations	3

Students must adhere to departmental prerequisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

Law Enforcement Certificate

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The undergraduate certificate in Law Enforcement provides a detailed, comprehensive, and advanced education in the field of law enforcement. This program is designed for students who are employed or will work in the field of law enforcement.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of law enforcement that students can apply to their current or future careers in the field.

Students completing the Law Enforcement certificate program will have the knowledge and skills to evaluate and respond to a variety of situations in law enforcement professions that require technical, analytic, substantive, and ethical decision-making. They will understand the different environments and contexts in which law enforcement carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Certificate

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the school offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The undergraduate certificate in Law Enforcement requires 18 credit hours of coursework.
2. A maximum of 6 transfer credits may be applied to the certificate.
3. Students must receive a minimum C- grade in each course applied to satisfy the certificate requirements.

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 4043	Law Enforcement	3
CRJU 4540	Evidence-Based Approaches in Law Enforcement	3
Elective Courses		**6**
Select one course from each of the following categories:		
Topic Area		
Select (p. 998)**one** course from the Topic Area list		
Professional Skills		
Select (p. 998)**one** course from the Professional Skills list		
Total Hours		**18**

Program Electives

There are two elective categories, Topic Area and Professional Skills. The Topic Area elective allows the student to explore a different aspect of law enforcement. The Professional Skills elective allows the student to hone skills related to law enforcement.

Topic Area

Code	Title	Hours
CRJU 3310	Contemporary Issues in Law Enforcement	3
CRJU 3320	Police-Community Relations	3
CRJU 3520	Juvenile Justice	3
CRJU 3530	Juvenile Delinquency	3
CRJU 4014	Federal Wildlife and Fisheries Investigations	3
CRJU 4410	Criminal Law and Constitutional Procedures	3
CRJU 4430	Law and Society	3
CRJU 4450	Homeland Security	3
PSCI 4427	Law, Politics and Justice	3
SOCY 4340	Juvenile Delinquency	3
SOCY 4700	Sociology of Law	3
Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.		

Professional Skills

Code	Title	Hours
CRJU 4310	Leadership Roles in Criminal Justice	3
CRJU 4331	Crime Analysis and GIS	3
CRJU 4939	Internship (must be related to Law Enforcement and must be pre-approved)	1-9
CSCI 1001	Computer Forensics I	3
GEOG 2080	Introduction to Mapping and Map Analysis	3
GEOG 4080	Introduction to GIS	3

Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

Nonprofit Management Certificate

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The undergraduate certificate in Nonprofit Management is designed to appeal to students with a background in any major, or non-degree students, who are interested in working in the nonprofit sector. The certificate is designed to allow students to demonstrate to potential employers that they have the knowledge and skills necessary to succeed in the nonprofit workplace. Competencies covered by the certificate include foundations and management of the nonprofit sector, cultural competence and diversity, and financial resource development, among others. In addition, students have the opportunity to gain real-world experience and connections through nonprofit internships and field experiences.

Completion of the coursework requirements of the certificate and associated extracurricular field experiences allow the student to earn the additional credential of Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) pursuant to standards and competencies set by the National Leadership Alliance. Additional information about the undergraduate Certificate in Nonprofit Management may be obtained by contacting cnp@ucdenver.edu.

Program Delivery

- All courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Certificate

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the school offering the certificate.

- Click here (p. 109) for information about Academic Policies

Program Requirements

1. The undergraduate certificate in Nonprofit Management requires 18 credit hours of coursework.
2. All credit hours for the certificate must be completed at CU Denver. Transfer credits are not accepted.
3. Students must earn a minimum C- grade in each undergraduate course applied to satisfy the certificate requirements.

Code	Title	Hours
Required Courses		
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4140	Nonprofit Financial Management	3
PUAD 4939	Public Service Internship	3
Elective Courses		**9**
Select three courses from the following:		
PUAD 3005	Collaboration Across Sectors	
PUAD 4004	Building Public and Financial Support for Nonprofit Organizations	
PUAD 4006	Organizational Development	
PUAD 4007	Nonprofit HR: Governance, Staff, Volunteer Management	
PUAD 4009	Human Service Organizations	
PUAD 4145	Philanthropy	
PUAD 4160	Nonprofit Boards and Executive Leadership	
PUAD 4020	Social Entrepreneurship	
PUAD 4600	Special Topics in Public Service (Study Abroad in East Africa)	
PUAD 4628	Social Problems and Policies in the Urban Environment	
Any other approved School of Public Affairs nonprofit elective		
Total Hours		**18**

Certified Nonprofit Professional Credential

Students completing the Nonprofit Management certificate may choose to simultaneously earn the national Certified Nonprofit Professional (https://www.nonprofitleadershipalliance.org/cnp/) (CNP) credential from the Nonprofit Leadership Alliance by completing additional extracurricular requirements and an examination. Contact cnp@ucdenver.edu for more information.

Victims and Victim Services Certificate

Introduction

Please click here (p. 966) to see School of Public Affairs information.

The undergraduate certificate in Victims and Victim Services provides a detailed, comprehensive, and advanced education in fields related to victims and victim services. The program is designed to meet the needs of students who wish to work in fields related to victim services or who are currently working in this field and would like to enrich their professional development.

The program applies a multi-faceted approach to higher education that:

- Enhances analytical thinking and inclusive, relevant approaches to learning and the development of professional skills; and
- Focuses on specific, yet comprehensive, substantive areas of victims and victim services that students can apply to their current or future careers in the field.

Students completing the Victims and Victim Services certificate program will have the knowledge and skills to evaluate, manage, and respond to a variety of situations and issues that professionals in fields related to victims and victim services face. Specifically, they will possess technical, analytic, substantive, and ethical proficiencies that will facilitate their professional interactions and development. They will understand the different environments and contexts in which victim advocates and other professionals in this and related field carry out their responsibilities.

Program Delivery

- Courses are offered on campus, online, and in remote and hybrid formats.

Declaring This Certificate

- Please contact spa.advising@ucdenver.edu.

General Requirements

Students must satisfy all requirements as outlined below and by the school offering the certificate.

- Click here (p. 109) for information about Academic Policies.

Program Requirements

1. The undergraduate certificate in Victims and Victim Services requires 18 credit hours of coursework.
2. A maximum of 6 transfer credit may be applied to the certificate.
3. Students must receive a minimum C- grade in each undergraduate course applied to satisfy the certificate requirements.

Code	Title	Hours
Required Courses		
CRJU 1000	Criminology and Criminal Justice: An Overview	3
CRJU 2041	Criminological Theory	3
CRJU 3285	Trauma in the Criminal Justice System	3
CRJU 4170	Victimology	3
Elective Courses		**6**
Select one course from each of the following categories:		
Victims Focus		
Select (p.	)**one** course from the Victims Focus list	
Professional Setting		
Select (p.	)**one** course from the Professional Setting list	
Total Hours		**18**

Program Electives

There are two elective categories, Victims Focus and Professional Setting. The Victims Focus elective allows the student to learn about an area of violence in a more in-depth capacity. The Professional Setting elective allows the student to hone skills related to service delivery.

Victims Focus

Code	Title	Hours
CRJU 3250	Violence in Society	3
CRJU 3280	Trauma Among Correctional Populations	3
CRJU 3290	Capital Punishment	3
CRJU 4140	Interpersonal Violence	3
CRJU 4150	Sex Offenders and Offenses	3
CRJU 4600	Special Topics in Criminology and Criminal Justice (Fatal Violence Against Indigenous Women)	1-6
CRJU 4600	Special Topics in Criminology and Criminal Justice (Human Trafficking)	1-6
CRJU 4600	Special Topics in Criminology and Criminal Justice (Juvenile Violence)	1-6
HDFR 1080	Lifespan Issues in Family Violence	3
HIST 4308	Crime, Policing, and Justice in American History	3
PSCI 4807	Political Violence	3
PSYC 3611	Psychology of Women	3
SOCY 4460	Hate Groups and Group Violence	3
SOCY 4780	Violence in Relationships	3

Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

Professional Setting

Code	Title	Hours
CRJU 4310	Leadership Roles in Criminal Justice	3
CRJU 4939	Internship (must be related to Victims and Victim Services and must be pre-approved)	1-9
HDFR 4003	Leadership and Organizations	3
HDFR 4004	Family and Comm. Prog. II Grant Writing/ Fundraising	3
HDFR 4090	Helping Profession Skills in HDFR	3
HDFR 4260	Family Systems and Social Justice	3
HDFR 4860	Trauma Informed Care for Diverse Populations and Co-occurring Disorders	3
PUAD 3002	Organizational and Strategic Management	3
PUAD 3003	Introduction to Nonprofit Organizations	3
PUAD 3110	Seminar in Nonprofit Management	3
PUAD 4002	Leading and Engaging for the Public Good	3

PUAD 4009	Human Service Organizations	3

Students must adhere to departmental pre-requisites, if applicable. Other electives not already listed may be considered, but the student must receive approval from the academic advisor prior to enrollment.

CU Denver Honors Programs

Leadership

Director: Jennifer Reich, PhD
Senior Program Coordinator: Elisabeth Hawksbee
Program Coordinator: Asuka Morley

Contact

Office: 1047 Ninth Street Park
Telephone: 303-315-7838
E-mail: UHL@ucdenver.edu
Website: https://www.ucdenver.edu/honors (https://www.ucdenver.edu/honors/)

Overview

With two pathways to honors, you can choose the program which best fits your educational journey.

Both the Honors Scholars Program (HSP) and the University Honors and Leadership (UHL) Program provide honors-level education and have unique benefits. As part of the UHL program, you will join a supportive cohort with other honors students and complete dedicated coursework together, while the Honors Scholars Program allows for more flexible learning options that you design around your passions and goals. Each program is aimed to help you achieve your educational goals by developing your talents and feeding your intellectual curiosity.

Programs

- Honors Scholars Program (p. 1003)
- University Honors and Leadership Program (p. 1004)

Honors Scholars Program

Overview

The Honors Scholars Program (HSP) provides CU Denver undergraduates with opportunities to identify and accomplish challenging and enriching learning experiences. Students may combine curricular, co-curricular, and extra-curricular activities to design a path to completion of the honors certificate.

Students must complete the equivalent of 15 credit hours of honors-identified work and have a minimum cumulative GPA of 3.25 to earn the certificate. To be eligible for the certificate, students must have a GPA of 3.25 or higher based on high school performance for entering first-time first-year students or college GPA for continuing students. Students may petition for a waiver for lower GPSs for entry into the certificate program. Students must apply to HSP prior to completing 105 credit hours of college coursework.

Details on how to apply and on how to complete the certificate can be found at www.ucdenver.edu/honors (http://www.ucdenver.edu/honors/).

Program Requirements

The Certificate has two elements:

Curricular: Students complete 12 credit hours of coursework (or 15 hours if they opt out of the extra- and co-curricular activities described below). The curricular requirement might be accomplished through fulfillment of a range of activities including, but not limited to, an honors section of a course, a first-year experience seminar designated as honors, a 5000 level course (by permission of instructor), thesis credit hours in a department, an honors contract negotiated with faculty to extend assignments in existing courses, and/or an independent study

Extra-Curricular/Co-Curricular: Students who wish to replace one course with extra-curricular or co-curricular activities will need to complete 145 total hours of engagement that enhance student learning. These may include, but are limited to, participation in EUReCA! grants or other extra-curricular mentored research, conference, colloquia, or seminar presentations, participation in RaCAS, performances, exhibitions, leadership activities, community service and engagement, study abroad, internships, or completion of honors workshops. To earn points, students must propose an activity and specify the time commitment and the ways it enhances their education or development. These activities will be evaluated, approved, and tracked by honors program staff, advisors, faculty, and administrators.

Curriculum

To earn the honors certificate, students must complete 15 credit hours of honors-level work and maintain a 3.25 or better.
Students may do so in a variety of ways, including:

- an honors section of a course, offered by a department
- a first-year experience seminar designated as honors
- a 5000-level course (by permission of instructor)
- departmental thesis credit
- an honors contract negotiated with faculty to extend assignments in existing courses
- an independent study

Students may replace three (3) credit hours of coursework with co-curricular or extra-curricular activities that may include but are not limited to:

- Undergraduate (EUReCA!) research grants or other mentored research conferences, colloquia, or seminar presentations
- Research and Creative Activities Symposium (RaCAS)
- Performances
- Exhibitions
- Leadership activities
- Community service and engagement
- Study abroad
- Internships
- Honors workshop

University Honors and Leadership Program

Introduction

The University Honors and Leadership Program (UHL) provides students with unique learning experiences, scholarship support, and a sense of community unlike anything else at the university. Students who come from myriad majors complete coursework together in small, discussion-based seminars taught by exceptional faculty. UHL courses have an interdisciplinary focus and explore a range of important topics. With a focus on developing skills to analyze, understand, and solve complex social problems from multiple perspectives, UHL students learn to be leaders through discussion-based classes, personal goal-setting, and community engagement.

Students who enter in their first year of college complete 24-27 credit hours together, which includes completion of the majority of the CU core requirements (you will still need math and lab science) and a minor in Multidisciplinary Honors and Leadership upon graduation.

Students who enter UHL as an upper division student will complete 15 credit hours together and will earn a minor in Honors and Leadership Studies upon graduation.

The Academic Program

For **first-time freshmen**, UHL is a multidisciplinary cohort program consisting of 24-27 semester hours of coursework to be completed over three or four years. The UHL courses substitute for most of the CU Denver core curriculum requirements and leads to a minor in Multidisciplinary Honors and Leadership. Students have a shared year-long first-year experience, taking a core of coursework. The second and third years of the UHL program offer electives designed for the minor. In the final year, students complete a two-course capstone senior seminar. UHL students who successfully satisfy the course and credit-hour requirements and maintain a GPA of 3.25 or higher in their UHL courses will graduate with “University Honors.”

For **transfer students and upper division students**, UHL is a multidisciplinary cohort program consisting of 15 semester hours of coursework to be completed over two years. The program leads to a minor in Honors and Leadership Studies. Students have a shared seminar in their first year in the program, nine credits of UHL electives, and a two-course senior seminar in their final year.

Undergraduate Courses A-Z

Catalog Course Information and Definitions

The courses listed here are included in the CU Denver campus catalog during the 2022–23 academic year. This listing does not constitute a guarantee that any particular course will be o#ered during this year.

Also see the online Class Search (https://isis-cs.prod.cu.edu/psc/csprod/EMPLOYEE/HRMS/c/CU_SELFSRV_PUB.CLASS_SEARCH.GBL) functionality for details about specific class offerings and schedules. For questions/more information regarding specific course availability, programs, and major requirements, please contact each school or college.

Core – Course is approved for specific core curriculum (i.e. arts and sciences curriculum; quantitative reasoning and mathematical skills)

Cross-Listed – Class that is offered along with another class that has the same topic, title, and course content. Max Hours displayed for each cross-listed class is the total number of hours allowed for all courses completed within a particular cross-listed group. *See below for more information on Max Hours.*

GT - Course is approved by the Colorado Department of Higher Education for statewide guaranteed transfer as part of the gtPathways program.

Max Hours (in Course Description) – Total number of applicable credit hours that count toward a student's degree for a particular course or cross-listed group.

Requisite:

- **Prerequisite** – Specific course completed or "in progress" (i.e. ENGL 1020 Core Composition I or ENGL 1020 Core Composition I with C- or higher)
- **Corequisite** – Specific course taken at the same time (i.e. ENVS 1044 Introduction to Environmental Sciences taken same time as ENVS 1045 Introduction to Environmental Sciences Laboratory)
- **Restriction** – Restricted to a specific population (i.e. Restricted to MUSC majors or junior standing, etc.)

Course Number Definitions:

- Courses numbered 1000-2999 are considered lower-division undergraduate.
- Courses numbered 3000-4999 are considered upper-division undergraduate.
- Courses at the 5000 level and above are graduate.

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- Accounting (ACCT) (p. 1007)
- Anthropology (ANTH) (p. 1010)
- Arabic (ARAB) (p. 1015)
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B

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C

- Chemistry (CHEM) (p. 1034)
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Accounting (ACCT)

ACCT 2200 - Financial Accounting and Financial Statement Analysis (3 Credits)
The financial accounting process, the role of the profession and the analysis of financial statements. Principal focus on interpretation of financial statements, with emphasis on asset and liability valuation problems and the determination of net income. Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher.

ACCT 2220 - Managerial Accounting and Professional Issues (3 Credits)
Introduces managerial accounting. Shows managers how to use accounting information to make decisions. Principal focus on cost behavior analysis, budgeting and product costing. Prereq: MATH 1070, or MATH 1060, or MATH 1080, or MATH 1110, or MATH 1120, or MATH 1130, or MATH 1401 with a grade of C- or higher and ACCT 2200 with a C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1070, or MATH 1060, or MATH 1080, or MATH 1110, or MATH 1120, or MATH 1130, or MATH 1401 with a grade of C- or higher and ACCT 2200 with a C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

ACCT 2550 - Introductory Accounting for Entrepreneurs and the Arts (3 Credits)
An integration of financial and managerial accounting processes as they relate to Entrepreneurs, Arts & Media managers and similar applications. This course will cover the analysis and interpretation of financial statements, asset and liability valuation and the determination of net income. Incorporates the use of accounting information to make decisions focusing on cost behavior analysis, budgeting and product costing in entrepreneurial and arts related businesses. Prereq: MATH 1070 or 1110. Max hours: 3 Credits.
Grading Basis: Letter Grade

ACCT 3220 - Intermediate Financial Accounting I (3 Credits)
A foundation course in financial accounting, this course provides an intensive analysis of generally accepted accounting principles, accounting theory and the construction and interrelation of financial statements for public corporations. Encourages critical thought and application of financial accounting standards to business transactions. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 3230 - Intermediate Financial Accounting II (3 Credits)
Continuing the intensive coverage of financial accounting from ACCT 3220/ACCT 6031, this course covers concepts of financial accounting theory and generally accepted accounting principles not covered in 3220/6031. This typically includes detailed coverage of liabilities and equity, especially the topics of leases, deferred taxes, pensions and stock-options. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 3220, completed with a grade of a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6032. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

ACCT 3320 - Intermediate Cost Accounting (3 Credits)
Cost accounting links financial and managerial accounting and emphasizes communication between accountants and managers. Topics include managerial uses of cost data for decision making, analysis of activities and cost behavior, the role of accounting in planning and control, and computer-assisted decision modelling. A grade of C or higher is required in this course to proceed to the next level ACCT course or receive credit for the CPA license. Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6070. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 2220 and DSCI/BANA 2010 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

ACCT 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.

ACCT 4030 - Financial Accounting (3 Credits)
Analysis of financial accounting concepts, the development of accounting thought and principles and critical review of generally accepted accounting principles. (Not recommended for candidates planning to sit for the CPA examination.) Note: Students who have taken ACCT 3220 or ACCT 3230 (or equivalent) may not take this course. Prereq: ACCT 2200 and ACCT 2220 or equivalent. Must have a 'C' or better in courses. Strictly enforced. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors within the Business School.

ACCT 4054 - Accounting Information Systems (3 Credits)
This course focuses on the analysis, design, implementation and control of accounting information systems. Emphasis is placed on primary business processes including documentation, modeling, retrieving information to support managerial decisions and controlling risks. Topics include transaction cycles, relational database modeling, data analytics and information systems risks and controls. Must earn a grade of C or better to qualify for graduation at the UG level and to receive credit for the CPA license. Prereq: ACCT 3220 with a grade of C or higher and ISMG 2050 with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6054. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a grade of C or higher and ISMG 2050 with a grade of 'C-' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4070 - Management Accounting (3 Credits)
Designed to provide students with a foundation in management accounting models and information, with emphasis on management decision making uses of accounting information. (Not recommended for candidates planning to sit for the CPA examination.) Prereq: ACCT 2200 and 2220 or equivalent with a grade of a 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Note: Students who have taken ACCT 3320 or its equivalent may not take this course. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ACCT 4240 - Advanced Financial Accounting (3 Credits)
Advanced financial accounting concepts and practices with an emphasis on accounting for equity investments, business combinations, and foreign currency. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3230 or ACCT 6030 or ACCT 6032 each with a grade of C or higher, or department consent. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3230 or ACCT 6030 or ACCT 6032 each with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4280 - Accounting Ethics (3 Credits)
This course examines the ethical responsibilities of accounting professionals from a personal and professional perspective, including examples of ethical dilemmas accounting professionals confront. The course utilizes various authoritative codes of conduct, professional standards and applied ethical theory as ethical guidance for auditors, accountants, tax professionals, and accounting management. A variety of case studies are employed to give students practice in developing a decision making approach in dealing with difficult ethical scenarios. Prereq: ACCT 4620. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq ACCT 4620 Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ACCT 4282 - Capitalism, Accounting and Ethical Choices (3 Credits)
Examines the development of the U.S. economy from 1850 to today with emphasis on the ethics of accounting, capitalism, and government controls. Prereq: ACCT 3220 with a C or higher or permission. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4330 - Managerial Accounting Problems and Cases (3 Credits)
Critical analysis of advanced topics in managerial accounting. Considerable use of cases and current readings. Prereq: Completion of ACCT 3320 with a grade of 'C'. Strictly enforced. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4370 - International Accounting (3 Credits)
Designed to expose students to the international aspects of accounting and financial management. Includes discussion of some of the different financial accounting practices across countries; financial statement analysis in a global context, international auditing practices and procedures, international tax implications and the implications of operating within the regulations of the Foreign Corrupt Practices Act, the European Union, North American Free Trade Agreement and General Agreement on Tariffs and Trade. Prereq: Completion of ACCT 3220 with a grade of 'C' or better. Strictly enforced. Cross-listed with ACCT 6370 and INTB 6370. Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ACCT 4410 - Fundamentals of Federal Income Tax (3 Credits)
Provisions and procedures of federal income tax laws and requirements affecting individuals and business organizations, including problems of tax planning and compliance. Note: Students cannot receive credit for both ACCT 4410 and ACCT 6140. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3220 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6140. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ACCT 4420 - Taxation of Business Entities (3 Credits)
A federal tax course stressing tax planning issues affecting corporations (both C corporations and S corporations) and partnerships. Note: A grade of C or higher must be earned to receive credit for the CPA license. Note: Students cannot receive credit for both ACCT 4420 and ACCT 6150. Cross-listed with ACCT 6150. Prereq: ACCT 4410 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 4410 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher

ACCT 4442 - Accounting: Professional Research and Communications (3 Credits)
This course provides students with a structured approach to researching and communicating practice-oriented financial accounting, auditing, and tax-related issues. After completing this course, students should be able to effectively: (1) Communicate (both oral and written) solutions to practice-oriented financial accounting, auditing, and tax-related issues. (2) Navigate through U.S. and international accounting, auditing, and tax authorities. (3) Conduct systematic research for all types of accounting-related problems then reach and communicate efficient conclusions using a variety of techniques. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Prereq: ACCT 4620 and ACCT 4410 both with a grade of C or higher. Cross-listed with ACCT 6442. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher Prereq: ACCT 4620 and ACCT 4410 both with a grade of C or higher

ACCT 4490 - Experiential Learning (3 Credits)
Designed to provide practical knowledge on developing a professional practice in accounting or financial management. Topics: Marketing, operating a professional practice. Lectures, guest speakers student projects. Prereq: ACCT 3220 completed with a 'C' or better, or permission of instructor. Cross-listed with ACCT 6490. Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4520 - Oil and Gas Accounting (3 Credits)
The Oil and Gas Accounting course is designed to give students an overview of the oil and gas industry and the particular accounting issues this industry faces. The focus is on the oil and gas industry but many of the issues discussed are appropriate and applicable to all energy-related entities. This is a valuable learning experience for those interested in acquiring an understanding of the accounting issues for energy management firms in preparation for entry into public accounting. The course enjoys support from the energy industry in the form of guest speakers and project ideas. Prereq: ACCT 3220 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6520. Max Hours: 3 credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4620 - Auditing Theory (3 Credits)
Auditing Theory: Focus on the professional responsibilities of CPAs, generally accepted auditing standards, and PCAOB auditing standards, with emphasis on the theory underlying the development of standards, objectives and procedures. Students cannot receive credit for both ACCT 4620 & ACCT 6020. Note: A grade of C or higher must be earned to receive credit for the CPA license. A grade of B or higher must be earned if planning to take 6025 in the future. Prereq: ACCT 3220 with a grade of C or higher. Coreq: ACCT 4054. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a grade of C or higher. Coreq: ACCT 4054.
Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ACCT 4625 - Auditing Practice (3 Credits)
Focus on the application of generally accepted auditing standards and PCAOB auditing standards to practice. Emphasis on procedures used by CPAs to gather and document audit evidence. Prereq: ACCT 4620 with a grade of C (2.0) or higher. Note: A grade of C or higher must be earned to receive credit for the CPA license. Note: Students cannot receive credit for both ACCT 4625 and ACCT 6025. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 4620 with a grade of C (2.0) or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

ACCT 4780 - Accounting and Information Systems Processes and Controls (3 Credits)
The course is designed to develop knowledge and skills used to understand and evaluate corporate accounting processes and systems. It focuses on financial and information system internal controls and the flow of corporate information through an accounting system. A financial system objective and risk assessment approach is used to present concepts and techniques for evaluating the adequacy of system processes and controls. Cross-listed with ACCT 6510, ISMG 4780, and ISMG 6510. Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT 3054 with a grade of 'C' or better (strictly enforced). Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ACCT 4800 - Accounting for Government and Nonprofit Organizations (3 Credits)
Planning and control of government and nonprofit organizations. Includes program budgets, responsibility accounting and fund accounting. Note: A grade of C or higher must be earned to receive credit for the CPA license. Prereq: ACCT 3220 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ACCT 6080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ACCT 3220 with a C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ACCT 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 8 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ACCT 4900 - Professional Certification in Accounting (3 Credits)
This course will prepare students for the Uniform Certified Public Accountant Examination, including the Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting (FAR), and Regulation (REG) sections. Topical coverage will include a balance of most-tested topics, difficult topics, and exposure to topics not addressed in required accounting degree courses. Note: there will be a materials fee of $1,100 for this course. All materials will continue to be available until successful passage of the CPA Exam. Note: Undergraduate Accounting students typically perform better in this class when taking it during the final semester prior to graduation. Restriction: Restricted to Undergraduate and MS Accounting students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Undergraduate and MS Accounting students.

ACCT 4915 - Accounting for the Public Interest (3 Credits)
Applies accounting knowledge and concepts in a not-for-profit organization. Student volunteers help with functions or special projects and are supervised by both faculty members and personnel from the agency to which they are assigned. Prereq: Permission of instructor. Cross-listed with ACCT 6015. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

ACCT 4950 - Special Topics (3 Credits)
Research methods and results, special topics and professional developments in accounting. Consult the current 'Schedule Planner' for semester offerings. Prereq: Varies according to topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to undergraduate majors within the Business School.

Anthropology (ANTH)

ANTH 1000 - Anthropology: Past and Present (3 Credits)
Anthropology is the study of humankind in all of its diversity and complexity. Anthropologists have traditionally approached the study from four distinct perspectives: biological, cultural, linguistic and archaeological. This course considers how anthropologists study humankind from these four perspectives and the robust picture of humanity that emerges. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 1001 - Special Topics in Anthropology (1-4 Credits)
Designed to give students a chance to evaluate critically some practical or theoretical problem under faculty supervision and to present results of their thinking to fellow students and instructors for critical evaluation. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

ANTH 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

ANTH 1302 - Introduction to Archaeology (4 Credits)
Introduces the study of past cultures and their environments. Emphasis is on the scientific method, aspects of research design and analytical techniques used by archaeologists to determine chronology, taphonomy, source production areas, exchange networks, and human-environment interactions. Note: Three hours of lecture and a two-hour lab each week. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

ANTH 1303 - Introduction to Biological Anthropology (4 Credits)
Introduces the study of human biological evolution, both processes and outcomes, from primate ancestors to fossil hominids to contemporary human populations. Methods of obtaining and interpreting data concerning the genetic, biological and evolutionary basis of physical variation in living and skeletal populations. Note: 3 hours of lecture and a 2 hour lab each week. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring, Summer.

ANTH 2102 - Culture and the Human Experience (3 Credits)
An application of the concept of culture to several aspects of the human experience, including gender relations, emotion and personality, cognition, language, health and healing and economic behavior. In exploring these dimensions of the human experience, the course focuses on selected cultures from each of the world's major geographic areas. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring, Summer.

ANTH 2400 - Exploring Culture through Social Media (3 Credits)
Introduction to social media and analysis applied to cultural change. Focus on theories and practices of non-fiction image-making and “doing digital ethnography” to examine a range of experience and knowledge among different societies, communities, technologies, policy discourses and ourselves. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 2840 - Independent Study (1-3 Credits)
Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

ANTH 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

ANTH 3000 - Globalization, Migration and Transnationalism (3 Credits)
Examines the cultural dynamics of globalization, including: the development of special economic zones in the global south, rural to urban migration, transnational migration, the maintenance of transnational ties, and cross-border social formations. Reviews the dynamics of globalization through case studies and film. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Spring.

ANTH 3042 - Lost Worlds and Crystal Skulls (3 Credits)
This class explores the differences between science and pseudoscience specifically within the realm of anthropology. Scientific method and critical thought are employed in a way that trains students to question and recognize the difference between fact and fiction in data. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3045 - Cannabis Culture (3 Credits)
Familiarizes students with anthropological approaches to the culture of cannabis, including medicinal and recreational. Topics: history, cultural uses, legalization, cannabis capitalism, health effects, race and inequality, regulatory policies, retailing and consumption. Ethnographic research for data collection emphasized. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

ANTH 3101 - Foundations of Cultural Anthropology (3 Credits)
Covers current theories in cultural anthropology and discusses the nature of field work. Major schools of thought and actual field studies are explored with an emphasis on anthropological data gathering, analysis and writing. Prereq: ANTH 2102 with a C- or higher. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.
Typically Offered: Fall.

ANTH 3121 - Language, Culture, and Communication (3 Credits)
Definitions of language and communication and their relationship to human behavior, thought and culture. The classification of languages, linguistic universals, language acquisition, multilingualism, and nonhuman communication, with consideration of the evolutionary implications of such studies. Prereq: ANTH 2102 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.

ANTH 3142 - Cultural Diversity in the Modern World (3 Credits)
An in-depth analysis of the phenomena of culture and application of the culture concept to understanding cultural diversity in the modern world. Applies the concept of culture to several basic aspects of human social life, for example: social class and gender relations, ethnicity, racism and sexism, education, health and economic behavior. Students explore these issues in the context of case studies of particular groups and/or communities, focusing primarily on the diversity of cultural expression in contemporary U.S. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ANTH 3150 - Special Topics in Medical Anthropology (3 Credits)
Seminar series on current issues in medical anthropology. Faculty offer a range of different courses, including the political economy of drugs, health and human rights, and reproductive health. Prereq: ANTH 2102 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 2102 with a C- or higher.

ANTH 3200 - Human Migration: Nomads, Sojourners, and Settlers (3 Credits)
Explores the relationship between human migration, voluntary and forced and social organization and culture in the modern world. Case studies include pastoralists, foragers, refugees, immigrants, sojourners and settlers and their impact on health, culture, identity, ethnicity, tradition and nationality. Cross-listed with PBHL 3200. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3202 - Anthropology of Health Care Policy (3 Credits)
Uses the tools and methods of cultural anthropology to analyze health care reform in the U.S. We examine analyses of the current health care system, debates over its reform, compare the US health care system to that of health care systems worldwide. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3301 - World Prehistory (3 Credits)
Explores of 3.5 million years of human cultural development that examines the prehistory of Africa, Asia, Europe and the Americas. Patterns and processes that underlie the earliest hominid expansion out of Africa, tool use, origins of fire, the peopling of the Americas, the development of metallurgy, the domestication of plants and animals and the rise of cities and the state are examined. Emphasis is on both regional developments and landmark projects that have helped clarify prehistory. Note: Introductory course in Archaeology (ANTH 1302) recommended. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ANTH 3315 - North American Archaeology (3 Credits)
Course provides a survey of the prehistoric and historic archaeology of the United States, Canada and Northern Mexico. Current knowledge of the subject and current debates are discussed. Prereq: ANTH 1302 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1302 with a C- or higher.

ANTH 3316 - History of Human Environmental Impacts (3 Credits)
Humans exist as active members of an ecosystem. There is increasing awareness that human actions have changed the environment and continue to do so. While ecologists, climatologists, and engineers work to address current and future environmental problems, the discipline of archaeology can provide a time depth and crosscultural breadth of perspective on how such issues have impacted human societies. This course will investigate and critically assess the claim that environmental and ecological factors have played a key role in the dissolution of once thriving civilizations. Examples will be drawn from across time and space, specifically emphasizing the archaeological record and the perspective it provides on a problem that is of critical relevance today. In this course students will: 1) Learn how humans have engaged with theirenvironments over the course of our species' evolutionary history; 2) Critically assess contemporary discussions of collapse and ecocide by contextualizing humanenvironment interactions within the frameworks of resilience, niche construction, and ecosystem engineering; 3) Use 'lessons from the past' to inform contemporary ecological debates; 4) Objectively evaluate the factual basis of various claims made about how humans affect, have affected, and likely will affect their environments; 5) Actively engage with the community to build sustainable gardens. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3320 - Southwestern Archaeology (3 Credits)
Considers the origins, characteristics, and interrelationships of the major culture areas in the American southwest, including the Anasazi, Hohokam, Mogollon, Sinagua and Northern Mexico. Note: ANTH 1302 recommended but not required. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3330 - Topics in Archaeology (3 Credits)
A flexible format for addressing specific topics in archaeology. Examples include the archaeology of the Great Plains, the Mediterranean Region, etc. Prereq: ANTH 2102 with a C- or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ANTH 2102 with a C- or higher.

ANTH 3500 - Human Osteology (4 Credits)
Provides in-depth knowledge of human osteology, including the following topics: skeletal anatomy; age, sex and stature determination; skeletal trauma/pathology; and taphonomy. Recitation component provides hands-on experience with skeletal material. Prereq: ANTH 1303 with a C- or higher. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 3512 - Human Evolution (3 Credits)
Provides an overview of the fossil and archaeological evidence for human origins. Theory and method in paleoanthropology is emphasized. The goal is to outline current knowledge of human biological evolution and the lifeways of our evolutionary relatives. Prereq: ANTH 1303 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.
Typically Offered: Fall, Spring.

ANTH 3560 - Human Variation and Adaptation (3 Credits)
This course explores the nature of modern human biological variation and adaptation. We address the evolutionary and biological theory that informs our study of contemporary human anatomy and physiology. Topics covered include, the nature vs. nurture debate, variation in skin pigmentation and the concept of “race”, skeletal adaptations, adaptations to extreme environments and sexbased variation. Term offered: every other year. Prereq: ANTH 1303 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 3590 - Primate Behavior Research at the Zoo (3 Credits)
Students will review information on primates, learn about data collection models, design a behavior observation project on captive primates, collect and analyze behavior data, write and present a formal scientific paper. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3666 - Anthropology of Death (3 Credits)
The primary goal of the course is to identify and understand the range of human expression through the treatment of human remains in anthropological literature with focus on burials, mortuary practices, and associated rituals. Along with more theoretical papers, specific case studies will be used to address a variety of topics and issues, such as historic and prehistoric social organization, bio-archaeology, cannibalism, human sacrifice, mummification, the ethics of studying human remains, and the treatment of pets in prehistory. The time range that we will cover in the course will span from the Neolithic to the early 20th century, and numerous cultures from all parts of the globe will be our subject matter. Max hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 3700 - Current Topics in Anthropology (3 Credits)
This undergraduate course offers a flexible format for addressing specific topics of special interest in anthropology, such as: aging, race and prejudice, class, warfare and aggression, ethnicity, myth and folklore, language and communication, Colorado prehistory and topics in evolutionary theory. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ANTH 3910 - Cross-Cultural Field Experience (3-6 Credits)
An intensive contact with another culture through supervised travel in the U.S. or in a country other than the United States. Written reports required. Note: Class includes pre-trip orientation lectures; in-country lectures by local resource people and supervising CU-Denver faculty. Max Hours: 6 Credits.
Grading Basis: Letter Grade

ANTH 3939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4000 - Special Topics in Anthropology (1-4 Credits)
Designed to give students a chance to evaluate critically some practical or theoretical problem under faculty supervision and to present results of their thinking to fellow students and instructors for critical evaluation. Prereq: Junior standing or higher. Cross-listed with ANTH 5000. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4010 - Medical Anthropology: Global Health (3 Credits)
This course is concerned with the underlying biological and cultural determinants of health throughout the human life cycle in global and cross-cultural perspective. Note: The first of a two-course sequence in medical anthropology and global health studies; the second is ANTH 4020. Prereq: Junior standing or higher. Cross-listed with ANTH 5014. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4050 - Quantitative Methods in Anthropology (3 Credits)
Surveys the ways of deriving meaning from anthropological data by numerical means, including, but not confined to basic statistical procedures. Prereq: Junior standing or higher. Cross-listed with ANTH 5053. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4080 - Global Health Practice (3 Credits)
A travel-study course that provides students the opportunity to work on global health issues in the context of a supervised internship experience. In addition to a formal internship placement or directed research opportunity, students attend formal lectures and participate in seminars devoted to addressing those health issues most relevant to the country in which the course is being taught. Prereq: Junior standing or higher. Cross-listed with ANTH 5080 and PBHL 4080. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4090 - Psychedelic Anthropology (3 Credits)
Psychotropic drugs, both legal and illicit, are a predominant part of our everyday lives. This course examines their use and meaning within cultures of health and wellness, and the plant medicine, spiritual, social, political and economic issues that surround their production, use and misuse. Course activities focus on ethnographic research strategies and arts-based approaches to public scholarship. Prereq: Junior standing or higher. Cross-listed with ANTH 5090 and PBHL 4090. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4121 - Zooarchaeology (3 Credits)
Introduction to the theory and methods of zooarchaeology through lectures, readings, and hands-on lab work identifying and analyzing mammalian skeletal material. Students will learns what mammalian remains indicate about biological and cultural evolution of humans. Cross-listed with ANTH 5121. Prereq: ANTH 1303 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ANTH 1303 with a C- or higher.

ANTH 4200 - Gender in Cross-Cultural Perspective (3 Credits)
A comparative analysis of gender-based status and social roles of women and men, with women's status and roles emphasized due to their near-universal construction as the "Other" sex. Examines in cross- and sub-cultural context the relations among women's status and their subsistence and reproductive activities; and the division of labor by sex, ideology and political economy. Prereq: Junior standing or higher. Cross-listed with ANTH 5200. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4230 - Fieldwork Methods (3 Credits)
This experiential course explores anthropological critiques, decolonizing approaches, and multi-media strategies to fieldwork methods with a focus on oral histories, visual narratives, community based participatory research, and indigenous ways of knowledge creation. At the end of the course, the student should have the cultural understanding and the methodological skills to complete a team-based fieldwork project successfully. Cross-listed with ANTH 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ANTH 4260 - Human Reproductive Ecology (3 Credits)
Considers the determinants of fertility variation within and among traditional human societies. Biocultural and ecological perspectives on pubertal timing, marriage patterns, birth seasonality, duration of birth intervals and reproductive senescence. Prereq: Junior standing or higher. Cross-listed with ANTH 5260. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4270 - Anthropology of the Body (3 Credits)
Explores how society, through culture, creates collective and individual bodies; embodied experience across the life course; and the body as an expression of social power, bodily modification and adornment. Note: ANTH 2102 or ANTH 3101 are recommended be taken before this course for undergraduate students. Cross-listed with ANTH 5270. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ANTH 4290 - Anthropology and Public Health (3 Credits)
"This course critically explores anthropological approaches to public health problems. Through a number of key issues and case studies, we examine how public health practice can be enhanced through anthropological research, theory and methodology. Prereq: Junior standing or higher. Cross-listed with ANTH 5290. Max hours: 3 Credits."
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4300 - Migrant Health (3 Credits)
This course examines health issues associated with transnational migration from an anthropological point of view. Drawing upon case studies, we examine the health of migrant communities in both host and sending nations. Prereq: Junior standing or higher. Cross-listed with ANTH 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4320 - Archaeology of Mexico and Central America (3 Credits)
Surveys the major prehistoric and protohistoric cultures and societies of that area of Mexico and Central America identified with the evolution of Meso-American civilization. Major topics include early human colonization of the Americas, the domestication of plants and animals, the emergence of regionally-based cultures and societies, trade and exchange and the evolution of urbanism and the state. Primary emphasis on such ancient cultures and societies as those of the Olmec, Zapotec, Maya, Teotihuacan, Toltec and Aztec. Prereq: Junior standing or higher. Cross-listed with ANTH 5320. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4330 - Lithic Analysis (3 Credits)
Examines the theoretical basis and methodological tools used by archaeologists in the analysis of prehistoric stone tools. Topics of discussion include the mechanics of stone fracture, typologies, use wear analysis and core reduction techniques. Prereq: Junior standing or higher. Cross-listed with ANTH 5330. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4350 - Anthropology of Globalization (3 Credits)
This course provides an overview of anthropological contributions to the study of globalization. Particular attention is devoted to: transformations in global capitalism, state and immigration policy, transnational families, health and transnationalism. Prereq: Junior standing or higher. Cross-listed with ANTH 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4380 - Archaeology of Hunters-Gatherers (3 Credits)
Explores the theory and methods used by archaeologists to investigate prehistoric hunter gatherers. Topics of concern include mobility, subsistence, procurement, and socio-political organization. Prereq: Junior standing or higher. Cross-listed with ANTH 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4390 - Laboratory Methods in Archaeology (3 Credits)
Methods and theories of archaeology are used to scrutinize the collection and interpretation of data and the relationships of archaeology to other disciplines. Core materials emphasize the critique of basic archaeological assumptions. Note: Course content varies slightly each time it is offered, in response to student needs and the availability of projects (e.g., laboratory work, urban excavation, survey and mapping). May be repeated for credit when topics change. Prereq: Junior standing or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: junior standing or higher

ANTH 4400 - Archaeology of Power and Inequality (3 Credits)
Addresses inequality and power through a long-term archaeological and theoretical perspective. Discusses explanations for the origins of power and inequality and their role in early small-scale societies and emerging complex politics. Prereq: Junior standing or higher. Cross-listed with ANTH 5400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4440 - Museums in the 21st Century (3 Credits)
This is an advanced course on natural history/anthropology museums. It will examine practical issues facing museums, and consider the complex questions that museums raise. The class includes lectures, discussions, and hands-on collection work, and exhibit/ outreach development. Cross-listed with ANTH 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ANTH 4500 - Advanced Issues in Human Evolution (3 Credits)
This flexible course offers an advanced treatment of issues in human biological evolution. Topics may emphasize morphological evolution, behavioral evolution, the environment of human evolution, non-human primate comparative information. Prereq: Junior standing or higher. Cross-listed with ANTH 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4560 - Human Ecology (3 Credits)
Studies demographic and ecological variables as they relate to human populations. Aspects of natural selection, overpopulation and environmental deterioration are considered. Prereq: Junior standing or higher. Cross-listed with ANTH 5560. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4570 - Landscape Archaeology (3 Credits)
Introduces spatial archaeology through intrasite analysis and regional studies. Methods treated include site location and quantitative spatial organization. Theoretical topics include definitions of community, ancient urbanism and the impact of subsistence and politics on relations to the landscape. Prereq: Junior standing or higher. Cross-listed with ANTH 5570. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4580 - Neanderthals and the Origin of Modern Humans (3 Credits)
Focuses on the human fossil record for the taxon Homo sapiens, including the earliest members of this group ("early" or "archaic" Homosapiens), the Neanderthals and so-called "anatomically modern" Homosapiens. The goal of the course is to survey the major issues within the area of modern human origins, and to learn about the evolutionary relationships, lifeways and behaviors of these groups. Prereq: Junior standing or higher. Cross-listed with ANTH 5580. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4590 - Primate Behavior (3 Credits)
Studies nonhuman primate behavior with emphasis on understanding social behavior, ecology and issues related to human evolution. Prereq: Junior standing or higher. Cross-listed with ANTH 5590. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4600 - Medical Anthropology (3 Credits)
Introduces students to the theories and concepts of medical anthropology, the study of human health and illness. Explores conceptions of the body, modalities of healing, the clinical encounter, and new medical technologies. Prereq: Junior standing or higher. Cross-listed with ANTH 5600. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ANTH 4650 - Disability Anthropology (3 Credits)
Drawing from anthropology and interdisciplinary disability studies, this course explores disability and impairment across time and space. Course materials integrate ethnography, archives, novels, films, podcasts, and social media to develop a holistic, empirically grounded understanding of disability as part of human diversity. Prereq: Junior standing or higher. Cross-listed with ANTH 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ANTH 4800 - Special Topics in Medical Anthropology (3-9 Credits)
Seminar series on current issues in medical anthropology. Faculty offer a range of different courses, including the political economy of drugs, health and human rights, and reproductive health. Prereq: Junior standing or higher. Repeatable. Cross-listed with ANTH 5800. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4810 - Integrating Anthropology (3 Credits)
Designed to build on specialized course work in the subdisciplines of anthropology, this course emphasizes the basic concepts that integrate and unite the discipline and give it unique perspective. These are the concepts of culture, adaptation and human evolution. In the last several weeks of the course, students consider the applicability of the anthropological perspective to specific human issues. Note: Centers on the critical examination and discussion of presentations made by department faculty and graduate students. Note: this course assumes that students have completed course work equivalent to a minor in anthropology. Prereq: Junior standing or higher. Cross-listed with ANTH 5810. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ANTH 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of anthropology. Note: Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ANTH 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ANTH 4910 - Field Experience in Archaeology (3-6 Credits)
Students participate in archaeological field research and data recovery and conduct laboratory analysis of materials recovered in the field. Emphasis is placed on excavation technique and accuracy of record keeping. Prereq: Junior standing or higher. Cross-listed with ANTH 5910. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

ANTH 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Arabic (ARAB)

ARAB 1000 - Introduction to Cultures of the Arabic-Speaking World (3 Credits)
Introduces students to the Arabicspeaking cultures of North Africa, some Asian countries, and the Gulf States, with a focus on politics, culture, economics, literature and the arts. Taught in English. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

ARAB 1010 - Beginning Arabic I (5 Credits)
Beginning course in Modern Standard Arabic (MSA) designed for students who have not had any experience with the language. Term offered: spring, fall. Max Hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ARAB 1020 - Beginning Arabic II (5 Credits)
Beginning course in Modern Standard Arabic (MSA) designed for students who have not had any experience with the language. Note: This course assumes that students have passed ARAB 1010 or equivalent, or have taken one year of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ARAB 2110 - Intermediate Arabic I (3 Credits)
Third-semester course in Modern Standard Arabic (MSA) designed for students who have had two semesters or comparable proficiency in the language. Note: This course assumes that students have passed ARAB 1020 or equivalent, or have taken two years of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ARAB 2120 - Intermediate Arabic II (3 Credits)
Fourth-semester course in Modern Standard Arabic (MSA) designed for students who have had three semesters or comparable proficiency in the language. Note: This course assumes that students have passed ARAB 2110 or equivalent, or have taken three years of high school Arabic, or possess equivalent proficiency. A grade of C- or higher in ARAB 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ARAB 2840 - Independent Study (1-3 Credits)
Independent study for students wishing to pursue nonoffered studies in Arabic language and culture. Department consent required. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

ARAB 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Architecture (ARCH)

ARCH 1110 - Introduction to Architecture (3 Credits)
Introduces students to the essential ways of looking at and thinking about buildings, sites and cities, exposing students to the various perspectives, positions and practices that they will encounter in both an architecture curriculum and in architectural practice. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 1711 - Architectural Visualization I (3 Credits)
First in the sequence of two visual studies courses, this course introduces students to the fundamental principles of two and three-dimensional visual analysis and communication. Students are taught basic drawing and model-making conventions, both mechanical and digital, and how to use drawings and models as design and communication tools. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 1721 - Architectural Visualization II (3 Credits)
Second in the sequence of two visual studies courses, this course introduces students to advanced principles of two and three-dimensional visual analysis and communication. Students are introduced to advanced mechanical and digital communication techniques and the use of drawings and models as design and communication tools. Prereq: ARCH 1711 and ARCH 2111 with a C- or higher. Restriction: Restricted to undergraduate students in the College of Architecture and Planning. No co-credit with ARCH 3801. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 1711 and ARCH 2111 with a C- or higher. Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

ARCH 2111 - Design Studio I - Foundational (6 Credits)
First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq or Coreq: ARCH 1711. Restriction: Restricted to undergraduate students in the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ARCH 1711. Restriction: Restricted to undergraduate students in the College of Architecture and Planning.

ARCH 2121 - Design Studio II - Foundational (6 Credits)
Second in the sequence of two foundational design studio courses, this course introduces students to the formal and spatial vocabulary of Architecture and its organizational principles through a series of micro-scale architectural design exercises. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Prereq: ARCH 2111 with a C- or higher and ARCH 1711 with a C- or higher. Coreq or Prereq: ARCH 1721. No co-credit with ARCH 3110. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2111 with a C- or higher and ARCH 1711 with a C- or higher. Coreq or Prereq: ARCH 1721. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 2230 - Architectural History I (3 Credits)
Introduces architecture and urbanism from prehistory to the mid-seventeenth century by exploring the social, cultural, technical, philosophical and aesthetic ideas that shaped buildings and other architectural and urban settings in different parts of the world. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3111 - Design Studio III - Elemental (6 Credits)
First in the sequence of two foundational design studio courses, this course introduces students to the fundamental principles of three-dimensional design and composition. Students learn to translate and express ideas through willful manipulation of form and space, in a sequential series of exercises. Prereq: ARCH 2121 with a C- or higher and ARCH 1721 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 3120. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 with a C- or higher and ARCH 1721 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 3121 - Design Studio IV - Elemental (6 Credits)
Second in the sequence of two elemental design studio courses, this course focuses on the design of small-scale buildings to advance students' understanding of the role of context in design communication. Students learn to translate non-formal concepts into sequential architectural experiences in deference to program and site. Prereq: ARCH 3111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. No co-credit with ARCH 4110. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.
Typically Offered: Fall.

ARCH 3130 - Construction Practices: Material and Structural Systems (3 Credits)
Provides an overview of the materials, systems, assemblies and processes that inform the design and construction of buildings, reviewing the building technologies and developing student understandings of the interrelationship between the interconnected elements and systems that define buildings and spaces. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3230 - Architectural History II (3 Credits)
Introduces architecture and urbanism from the mid-seventeenth century to the present, exploring the forces that shaped buildings and other architectural and urban settings in different parts of the world. Prereq: ARCH 2230 with a C- or higher. Restriction: Open to all undergraduate majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 with a C- or higher. Restriction: Open to all undergraduate majors.

ARCH 3330 - Building Systems I (3 Credits)
Introduces the concepts of thermal behavior of buildings, climate as a determinant of building design, energy use in buildings, natural and mechanical means of environmental control, plumbing, electrical, communication systems, water supply and sanitation systems. Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 3340 - Theory of Structures I (3 Credits)
Introduction to the analysis and design of structural elements and focuses on the principles of statics and the strength of materials. Topics include stress determination, deflection and the behaviors of tension, compression and shear in various structural elements. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Recommended Prereq: MATH 1130 OR MATH 1110 & 1120; PHYS 2010/2030 OR PHYS 2311/2321. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 3430 - Construction Practices: Building Envelope (3 Credits)
Discusses the principles and processes of building construction and introduces the major systems and assemblies that inform construction practices. Stresses the relationship between architectural concepts and emerging building technologies, teaching students how to select appropriate materials, systems and assemblies. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARCH 3600 - Special Topics Cultural (3 Credits)
Special topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3602 - Architecture Photography (3 Credits)
Architecture elective in photography of space, interior, and exterior with an emphasis on design composition of architecture. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3690 - Cultural Research Abroad (3 Credits)
Topics in architecture studies related to cultural inquiries including theory, cultural diversity, and/or cross cultural thinking in other cultures. Work shall include preparation in culture, history and language skills in other countries. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restrictions: Restricted to Junior standing or higher.

ARCH 3691 - Cultural Design Abroad (3 Credits)
Design topics in architecture studies related to cultural inquiries including design, cultural implications of design, and/or cross cultural application of design. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restrictions: Restricted to Junior standing or higher.

ARCH 3693 - Rome: Architecture & Urbanism (3 Credits)
The objective of this course is to provide a broad overview of the city's major architectural sites, topography, infrastructure and systems of urban design and organization through the study of the rich palimpsest of buildings, piazzas and landscapes from antiquity to the present day. Coreq: ARCH 3694. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3694. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.
Additional Information: Global Education Study Abroad.

ARCH 3694 - Rome: Documentation, Analysis and Design (3 Credits)
With graphic representation as the primary mode of inquiry, this course is an intensive study of a single building, piazza or landscape within the rich urban fabric of Rome. The graphical inquiry will be supported by pre-departure research and onsite observation and presentations. Coreq: ARCH 3693. Restricted to undergraduate BS-ARCH students with Junior standing or higher. Cross-listed with ARCH 6760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3693. Restriction: Restricted to undergraduate BS-ARCH students with Junior standing or higher.
Additional Information: Global Education Study Abroad.

ARCH 3700 - Special Topics Design (3 Credits)
Special topics in architecture studies related to design inquiries including theory, design skills, and/or analytical thinking. Restriction: Restricted to ARCH-BS majors with sophomore standing. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3701 - Survival Sketching (3 Credits)
The focus of this course will be the sketchbook and the keeping of a sketchbook. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3705 - Human Centered Design, Innovation and Prototyping (3 Credits)
Introduces techniques for collaborative design by interdisciplinary teams: design thinking, problem solving, and rapid prototyping. Teams of students design and implement increasingly complex projects while acquiring essential innovation and problem-solving skills. The course will culminate in a final project chosen by each team. Cross-listed with IWKS 2100. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3706 - 3D Design, Computation, and Prototyping (3 Credits)
Introduces the design and computer-controlled fabrication of three-dimensional objects using both additive (3D printing) and subtractive (laser cutter, CNC router/mill) processes. Various commercial and open-source software tools for 3D design (CAD), manufacturing (CAM) and visualization will be explored. Increasingly complex projects throughout the semester will be used to illustrate fabrication techniques. The course will culminate in a final project. Restriction: Restricted to ARCH-BS majors with sophomore standing. Cross-listed with IWKS 3100 and 5170. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3707 - Color Theory + Application (3 Credits)
This course will explore Color perception and theory; media/medium technique/application and landscape/built-environment drawing preparation, composition and presentation. The objective is to develop your understanding of color interaction and interrelationship especially, as it pertains to the use of color in the design and implementation of the built environment. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3708 - Introduction to the Essentials of Biomimicry (3 Credits)
Biomimicry is the conscious emulation of nature's genius that can be applied to the fields of design, engineering, medicine, transportation, and social interaction. This class will be geared towards designers and will give an overview of the discipline, the (3) Essential Elements, the human-nature connection, The Biomimicry Thinking Methodology, and Life's Principles. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3709 - Furniture Design (3 Credits)
Students learn how to design and build furniture in the College's woodshop. Topics include ergonometrics, properties of materials, principles and techniques of joinery and techniques of hand and machine tools. Cross-listed with ARCH 6180. Restriction: Restricted to ARCH-BS majors with sophomore standing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3800 - Special Topics - Technical (3 Credits)
Special topics elective will include coursework in either Digital Media In Design courses, Design-Build site Construction, or the Science and Art of Engineering Buildings. Additional topics will be develop in conjunction with the required undergraduate technical electives. Restriction: Must be an undergraduate Architecture student with sophomore standing or higher. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 3804 - Green Tech Eco-Furniture Fabrication I (3 Credits)
Green Tech I is the first of two courses that are a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3806. Cross-listed with ARCH 6375. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3806 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

ARCH 3805 - Beginning Revit (3 Credits)
Introduction to Building Information Modeling through Autodesk's Revit Architecture software. The course explores fundamental architectural concepts as they are developed and expressed in Revit. Appropriate program use and team learning experiences are emphasized. Prereq: ARCH 3110 or ARCH 2121. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. ARCH 3430 recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3110 or ARCH 2121. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher.

ARCH 3806 - Green Tech Eco-Furniture Fabrication II (3 Credits)
Green Tech II is the second of two courses that are a "real build" course in which students advance their knowledge of environmental design through full-scale construction of architectural elements, furnishings, accessories, finishes, outdoor gear, or even clothing. Restriction: Restricted to ARCH-BS majors with sophomore standing or higher. Coreq: ARCH 3804. Cross-listed with ARCH 6376. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ARCH 3804 Restriction: Restricted to ARCH-BS majors with sophomore standing or higher

ARCH 3949 - Internship I (1-3 Credits)
Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Prereq: Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

ARCH 4111 - Design Studio V - Analytical (6 Credits)
First in the sequence of two analytical design studio courses, this course introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical study of the relationship between architecture and culture. Focused on the design of small-scale buildings, students learn to incorporate structure, light, and material as expressive elements of an architectural composition. Prereq: ARCH 3121 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3121 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 4121 - Design Studio VI - Analytical (6 Credits)
Second in the sequence of two analytical design studio courses, this course advances students' understanding of the relationship between architecture and culture and their ability to design intermediate scale buildings as effective settings for cultural rituals. Students explore the role of history and precedent in the design process along with the role of detail in architectural compositions. Prereq: ARCH 4111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning. Max hours: 6 credits.
Grading Basis: Letter Grade
Prereq: ARCH 4111 with a C- or higher. Restriction: Restricted to undergraduate ARCH students within the College of Architecture and Planning.

ARCH 4220 - A History of Theoretical Discourse on Architecture (3 Credits)
This course traces the history of theoretical discourse on architecture from the Renaissance to the present. It explore the genealogy of current theoretical stances and critical methodologies in the discipline of Architecture through the close reading of a select group of historic and contemporary texts. Prereq: ARCH 3230. Cross-listed with ARCH 6220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3230.

ARCH 4340 - Theory of Structures II (3 Credits)
Focuses on the relationship between architectural concepts and the selection of structural systems. Addresses the qualitative and quantitative analysis of reinforced concrete, steel, and wood structural systems and members. Prereq: ARCH 3340 with a C- or higher. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 3340 with a C- or higher. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 4440 - Building Systems II (3 Credits)
Focuses on the environmental systems in commercial and other nonresidential buildings. Discusses natural and artificial lighting, HVAC systems, acoustics, vertical transportation and fire protection. Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2121 or ARCH 3110 or CEMT 2100. Restriction: Restricted to undergrad students in B.S. Architecture, B.S. Construction Management, and B.S. Construction Engineering Management.

ARCH 4610 - A History of American Architecture (3 Credits)
This course investigates the history of architecture in the United States as a chronological survey of buildings, architects, landscapes, and urban forms and as an exploration of the social, political, economic, technological, and similar issues that inform this built environment. Prereq: ARCH 2230 and 3230. Cross-listed with ARCH 6210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 and ARCH 3230.

ARCH 4612 - A History of Modern Architecture (3 Credits)
This course traces the various theoretical and formal developments in European and American Architecture from the end of the 19th century through the 20th century. The works of a select group of architects will be examined and discussed in relation to the diverse body of goals and objectives, ideas and ideals that constituted the Modern movements in architecture. Prereq: ARCH 2230. Restriction: Restricted to Sophomore standing or higher. Cross-listed with ARCH 6212. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ARCH 2230 Restriction: Restricted to Sophomore standing or higher

ARCH 4711 - Research Initiative Studio (6 Credits)
An elective advanced studio, this course introduces students to analysis and design as complementary processes. Students learn how to form design intentions based on analytical study and research of intersections of Architecture and other fields. Focused on the design of full-scale built pro-types, students learn to incorporate structure, light, and material as expressive elements of an architectural composition. Restriction: Restricted to undergraduate students in the BS Architecture Program. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restricted: Restricted to undergraduate students in the BS Architecture Program.
Typically Offered: Fall.

ARCH 4840 - Independent Study (1-3 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to architecture. Prereq: Restricted to undergraduate ARCH students within the College of Architecture and Planning with sophomore standing or higher. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to ARCH-BS majors with sophomore standing

ARCH 4949 - Internship II (1-3 Credits)
Experiential learning student internships sponsored by faculty in a field related to architecture. Minimum of 45 work hours per credit. Permission of instructor, advisor and acceptance in BS Architecture program. Must also have sophomore standing. Minimum 15 credit hours with 2.75 GPA. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Bioengineering (BIOE)

BIOE 1010 - Bioengineering Design and Prototyping I (3 Credits)
BIOE 1010 introduces students to bioengineering, and provides an introduction to possible careers and research topics in bioengineering. Students also learn human anatomy by understanding how to incorporate visual human data sets into computer prototyping and design tools. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to BIOE-BS majorss within the College of Engineering, Design and Computing.
Typically Offered: Fall.

BIOE 1020 - Bioengineering Design and Prototyping II (3 Credits)
BIOE 1020 extends work from BIOE 1010 by introducing students to practical skills around computer-aided design (CAD), modeling and prototyping with focus on project-oriented work aimed at design, prototyping and metrology of specific medical devices. Prereq: BIOE 1010 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: BIOE 1010 with a C- or higher.
Typically Offered: Spring.

BIOE 2010 - Introduction to Programming for Bioengineers (2 Credits)
Digital computers are the primary tools of modern engineers. This class introduces the undergraduate to general computing concepts, computer languages, and programming techniques. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Prereq: MATH 1401 with a C- or higher. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 2020 - Introduction to Computational Methods for Bioengineers (2 Credits)
A modern engineer is required to solve problems involving the physical world not only on paper, but also using numerical tools implemented on digital computers. This class introduces the students a first set of numerical algorithms for the solution of calculus-based engineering problems. Prereq: BIOE 2010 and MATH 2411 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 2010 and MATH 2411 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design, and Computing.

BIOE 2840 - Independent Study in Bioengineering (1-6 Credits)
Covers topics which students may wish to pursue on their own initiative with guidance from department faculty. Credit is awarded upon completion of a project. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 3010 - Bioinstrumentation (3 Credits)
This course is intended for junior bioengineering students to facilitate their development into bioengineering investigation. The course has been designed to introduce fundamental principles of circuit theory, analog and digital electronics and biological instrumentation techniques commonly used in biomedical research. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3020 - Introduction to Biomechanical Analysis (3 Credits)
This course will offer an overview of solid and fluid mechanics, as applied to biomechanical systems. After completing this course, students should have enough understanding of biomechanics to: (1) perform and interpret basic analytical of biomech. systems: (2) analytically reason through a design: (3) and choose a specialty. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195 and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3030 - Introduction to Biomaterials (3 Credits)
This course will cover different kinds of biomaterials in biomedical applications, and their physiological response in the biological environment. In addition, it will cover material properties, host response, and characterization techniques. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3040 - Physiology for Bioengineering (3 Credits)
This course will introduce students to central concepts in human physiology. This includes the structure, function and homeostatic role of key organs within the body; the engineering principles governing these systems and processes; and designing engineering-based solutions to overcome dysfunction in disease. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3050 - Cell & Molecular Bioengineering (3 Credits)
This course focuses on the quantitative description of biomolecular and cellular dynamics. The building and application of mechanistic models of biological rate processes will be covered including models of protein-protein interactions, receptor-ligand binding, enzymatic reactions, gene expression, receptor trafficking, biomolecular networks, cell growth and death, and pharmacokinetics. These models will be used to analyze cellular engineering strategies such as chimeric antigen receptor T-lymphocyte therapy (CAR-T), small interfering RNA (siRNA), transfection, and CRISPR-Cas gene editing. Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3051 - Cell & Molecular Bioengineering Lab (1 Credit)
Laboratory experience in cellular and molecular biology techniques. Experimental methods will be performed including protein, RNA, DNA purification and quantification, ligand binding, enzyme kinetics, polymerase chain reaction technology, and recombinant DNA technology. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Co-req: BIOE 3050. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Co-req: BIOE 3050 Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3060 - Biostatistics, Measurement and Analysis (3 Credits)
Students will learn and apply parametric statistics, including t-tests, ANOVA, and regression methods, using commercially available statistical software to the analysis of clinical and/or biological data. Further, they will be introduced to measurement error and the propagation of error technique. Restriction: Restricted to BIOE-BS majors. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3070 - Bioengineering Lab I (3 Credits)
Core bioengineering lab required of all major students. This lab introduces students to experimental techniques in the areas of Biomaterials, Biomedical Instrumentation, and Biomechanics. Prereq: BIOE 1020, 2020; PHYS 2331/2341; CHEM 3411/3418, MATH 2421, 3195, and BIOL 2061/2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 1020, 2020; PHYS 2331,2341; CHEM 3411,3418, MATH 2421, 3195; BIOL 2061,2081 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering , Design and Computing

BIOE 3071 - Bioengineering Lab II (3 Credits)
Lab sequence 2 of 2. A series of modules focused on quantitative techniques relative to Bioengineering. Modules will include Physiological data acquisition and analysis, Medical Imaging and Assistive Technologies. Prereq: BIOE 3070 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3070 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing.

BIOE 3090 - Introduction to BioDesign (3 Credits)
BioDesign I is the first course in a three sequence design process that provides students with a framework for identifying medical needs through clinical observation, environment analysis and product screening. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 3939 - Undergraduate Internship (1-6 Credits)
Department of Bioengineering Internship. Credit may be applied toward technical electives in the BS in Bioengineering degree. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 3 Credits. Semester Hours: 1 to 3
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 4035 - Undergraduate BioDesign II (3 Credits)
This represents the second semester of the core undergraduate Biodesign sequence. Students gain experience around Design and Prototyping, Verification and Validation, and evaluation of key components around biomedical technology development. Prereq: BIOE 3090. Restriction: Restriction: Restricted to full Bioengineering majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3090 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4039 - Mechatronics and Embedded Systems (3 Credits)
The course focuses on the design and construction of microprocessor-controlled electro-mechanical systems. Lectures review critical circuit topics (Ohm's law, RLC circuits, DC and AC signals, diode and transistor circuits, operational amplifiers, and digital signals), introduce microprocessor architecture and programming, discuss sensor and actuator component selection, robotic systems, and design strategies for complex, multi-system devices. Lab work reinforces lectures and allows hands-on experience with robotic and embedded systems design. Students must design and build an embedded systems device related to assistive technology. Cross-listed with BIOE 5039. Restriction: Restricted to students with BIOE major designation, or instructor approval. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4045 - BioDesign III (3 Credits)
This course represents the capstone culmination of the core undergraduate Biodesign experience. Students finalize all design, prototyping, testing and validation components, and present the project per professional standards to professionals and peers. Prereq: BIOE 4035 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 4035 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4053 - Optics and Microscopy in Biomedical Research (3 Credits)
Undergraduate overview of optical imaging, ranging from classical microscopy to advanced, non-linear techniques and includes theory, technology and applications in biomedical sciences. This will prepare students for developing and applying state-of-the-art optical imaging in their research. Cross-listed with BIOE 5053. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4054 - Regulatory Affairs (3 Credits)
This course covers standards of quality assurance and regulatory pathways that guide biomedical engineering industry. Cross-listed with BIOE 5054. Restriction: Restricted to BIOE majors or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4057 - Rehabilitation and Assistive Technology (3 Credits)
This course provides students with an overview of technologies and their use by and for persons with disabilities. Cross-listed with BIOE 5057. Restriction: Restricted to students with BIOE designation, or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4058 - Intro to Design, Disability, and Aging (3 Credits)
This course provides an introduction to the topic of disability and aging and the application of bioengineering principles for persons living with functional impairment(s) across the lifespan. Cross-listed with BIOE 5058. Restriction: Restricted to BIOE majors or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4063 - 3D Modeling for Bioengineers (3 Credits)
This course instills in the 3D modeling skills specific to the biomedical industry. Topics include computer aided design (CAD), medical imaging, image processing, patient specific image to three-dimensional (3D) model reconstruction, non-uniform rational b-spline (NURBS) surfaces, finite element and computational fluid dynamics (FEA/CFD) analyses and physical modeling using rapid prototyping. Prereq: 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.
Typically Offered: Fall, Spring.

BIOE 4064 - Advanced MatLab For Bioengineers And Life Scientists (3 Credits)
MatLab programming for undergraduate bioengineers and life scientists. Topics include MatLab syntax and optimization as well as techniques for working with scalars, time-series, images and multi-dimension datasets. Surface/Curve fitting. modeling, automation and classification will be covered. Cross-listed with BIOE 5064. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4067 - Human Factors and Usability Testing for Bioengineers (3 Credits)
This course provides an introduction to human factors testing and evaluation in the context of medical devices and assistive technology (AT). Particular focus will be given towards designing and applying usability testing to inform product design decisions or improvements. Topics include human factor considerations for aging and disabled populations (and their care providers), usability techniques, user experience data collection and interpretation, etc. Students will engage in hands-on human factors assessments such as contextual inquiry of surgery patients, cognitive walkthroughs with simulating disability, and product usability testing and iteration. Max hours: 3 Credits.
Grading Basis: Letter Grade

BIOE 4068 - Introduction to Medical Imaging (3 Credits)
This course will introduce undergraduates to the basic physics, technologies, and clinical methodologies underlying Ultrasound, MRI, CT, PET and SPECT imaging systems. The course will include lectures, and visits to campus hospital and research imaging systems as well as hands on ultrasound labs. Cross-listed with BIOE 5068. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4069 - Advanced Biomechanics for Undergraduates (3 Credits)
This course covers advanced topics such as blood flow dynamics, introduction to non-linear finite deformation techniques, blood rheology, and computational techniques. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Cross-listed with BIOE 5069. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4073 - Neural Interfaces and Bionic Limbs (3 Credits)
This course will introduce undergraduates to topics in neural interfaces (Brain machine interfaces, peripheral nerve interfaces etc), the issues involved in the design of mechatronic limb systems and the decoding algorithms used to map the neural interface to the mechatronic limb. Cross-listed with BIOE 5073. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4083 - Polymers in Biomedical Applications (3 Credits)
This course will introduce undergraduate students to fundamental synthetic method and basic characteristics of various polymeric biomaterials and their crucial roles in different biomedical applications. It will also cover how the polymers can be modified to enhance biomedical applications. Cross-listed with BIOE 5083. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.

BIOE 4085 - Tissue Engineering (3 Credits)
This course covers tools, techniques, characterization and applications in modern tissue engineering. Cross-listed with BIOE 5085. Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to BIOE-BS majors within the College of Engineering, Design and Computing

BIOE 4420 - Special Topics in Bioengineering (1-3 Credits)
Special topics of particular interest to undergraduate senior in the Bioengineering program. Registration requires departmental approval. Prereq: BIOE 3010, 3020, 3030, and 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOE 3010, 3020, 3030, 3040 with a C- or higher. Restriction: Restricted to BIOE-BS majors.
Typically Offered: Spring.

BIOE 4840 - Independent Study in Bioengineering (1-6 Credits)
Covers advanced topics which students may wish to pursue on their own initiative with guidance from department faculty. Credit is awarded upon completion of a project. Department Consent Required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

BIOE 4929 - Undergraduate Research Project (1-6 Credits)
Department of Bioengineering Research Project. Credit may not be applied toward the BS in Bioengineering degree. Department consent required. Restriction: Restricted to BIOE-BS majors. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Department Consent Required. Restriction: Restricted to BIOE-BS majors.

Biology (BIOL)

BIOL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

BIOL 1550 - Basic Biology: Ecology and the Diversity of Life (4 Credits)
Introduces the process of science, gene expression, biological diversity, evolution, and ecology. Highlights applications to contemporary issues. Lecture and lab course. Note: For students who are not majoring in biology. Biology and health career majors should not take this course. Students may not receive credit for this course if they have already received credit for BIOL 2010(2051) and BIOL 2020(2061). Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 1560 - Basic Biology: From Cells to Organisms (4 Credits)
Introduces the process of science, cell structure and function, survey of representative human and plant systems, and genetics. Highlights applications to contemporary issues. Lecture and lab course. Note: For students who are not majoring in biology. Biology and health career majors should not take this course. Students may not receive credit for this course if they have already received credit for BIOL 2010(2051) and BIOL 2020(2061). Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2010 - Organisms to Ecosystems (Gen Bio) (3 Credits)
Introduces four major areas of study: (1) evolution,(2) animal structure and function, (3) plant structure and function and (4) ecology. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Biology majors and pre-health career students must also take the accompanying laboratory BIOL 2011. No co-credit with BIOL 2030(2097) or BIOL 2061. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2011 - Organisms to Ecosystems Lab (Gen Bio) (1 Credit)
Investigations, observations, and experiments in evolution, bioinformatics, ecology, and animal behavior, anatomy, and physiology; requires off-campus field work. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Students are strongly encouraged to take BIOL 2010 concurrently or before they take this course. No co-credit with BIOL 2031(2098) or BIOL 2081. Term offered: fall, spring, summer. Max hours: 1 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2020 - Molecules to Cells (Gen Bio) (3 Credits)
Introduces four major areas of study: (1) the chemistry of biological systems; (2) the structure and function of the cell; (3) cellular energy transformations (photosynthesis and respiration); and (4) genetics (mitosis, meiosis, patterns of inheritance, molecular genetics). Note: This class is intended for students planning to take upper division biology courses and for biology majors. Biology majors and pre-health career students must also take the accompanying laboratory BIOL 2021. Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher. No co-credit with BIOL 2040(2095) or BIOL 2051. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher.
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

BIOL 2021 - Molecules to Cells Lab (Gen Bio) (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in cell biology, basic biochemical techniques, genetics, molecular genetics and applications of biotechnology. Note: This class is intended for students planning to take upper division biology courses and for biology majors. Prereq: BIOL 2011 (2081) or BIOL 2031 (2098) with a C- or higher. No co-credit with BIOL 2041(2096) or BIOL 2071. Term offered: fall, spring, summer. Max hours: 1 Credit. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Prereq: BIOL 2011 (2081) or BIOL 2031 (2098) with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

BIOL 2030 - Honors Organisms to Ecosystems (Gen Bio) (3 Credits)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Introduces four major areas of study: evolution, animal structure/function, plant structure/function, and ecology. Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences. Instructor permission required. No co-credit with BIOL 2010(2061) or BIOL 2097. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

BIOL 2031 - Honors Organisms to Ecosystems Lab (Gen Bio) (1 Credit)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UHL programs. Advanced study of evolution, plant and animal anatomy, developmental biology and includes two off-campus ecology field trips. Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences. No co-credit with BIOL 2011(2081) or BIOL 2098. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

BIOL 2040 - Honors Molecules to Cells (Gen Bio) (3 Credits)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Four major topics covered: the chemistry of biological systems, the structure/function of the cell, cellular energy transformations and genetics. Prereq: BIOL 2010 (2061) or BIOL 2030 (2097) with a C- or higher. Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01). Instructor permission required. No co-credit with BIOL 2020(2051) or BIOL 2095. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 2010 (2061) or BIOL 2030 (2097) with a grade of C- or higher Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01)
Typically Offered: Spring.

BIOL 2041 - Honors Molecules to Cells Lab (Gen Bio) (1 Credit)
Honors level course limited to students in the BA/BS/MD, Denver Bound and UNHL programs. Introduces the basic scientific approach and report preparation through exercises and experiments in cell biology, basic biomedical techniques, genetics, molecular genetics and applications of biotechnology. Instructor permission required. Prereq: BIOL 2011(2081) or BIOL 2031 (2098) with a grade of C- or higher. Restriction: restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01). No co-credit with BIOL 2021(2071) or BIOL 2096. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prerequisite: BIOL 2011 (2081) or BIOL 2031 (2098) with a grade of C- or higher Restriction: Restricted to Biology honors students within the College of Liberal Arts and Sciences(student group BH01)
Typically Offered: Spring.

BIOL 2750 - Introduction to Molecular Research Techniques (2 Credits)
Designed to give background knowledge and hands-on experience for a person wanting to work in a molecular-research laboratory. Introduction to basic molecular techniques including micropipetting, making media, DNA and RNA isolation, restriction digest, RT-PCR, and gel electrophoresis. Max hours: 2 Credits.
Grading Basis: Letter Grade

BIOL 2840 - Independent Study (1-3 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Note: registration by special processing form only. Prereq: Students must have completed one year of general biology with a grade of "C-" or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of BIOL courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of BIOL courses with a 2.75 GPA in BIOL courses
Typically Offered: Fall, Spring, Summer.

BIOL 3010 - Biology Career and Professional Development Seminar (1 Credit)
Open to all science majors. This course develops a student's understanding of the breadth of biology careers, such as biotechnology, field research, and bench research. This course will also work to develop a student's resume and cover letter writing skills as well as interviewing and job searching skills. Guest speakers and UCD alumni from various biology fields and careers will share their insight. Meets weekly. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall.

BIOL 3020 - Practical Laboratory Skills (1 Credit)
Designed for Students who are interested in working in a professional biology laboratory. Covers improvement of manual dexterity skills, understanding common laboratory apparatus and handling biological macromolecules and living cells. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.

BIOL 3074 - Human Reproductive Biology (3 Credits)
Comprehensive study of anatomy and physiology of human reproduction. Embryogenesis of male and female reproductive systems and detailed analysis of contraception, world population growth, population control and implications of population growth are also covered. Note: Students will not receive credit for this class if they have already received credit for BIOL 4074. Prereq: BIOL 3611 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3104 - Behavioral Genetics (3 Credits)
Interdisciplinary course on relationships between behavior and heredity, with emphasis on human behavioral genetics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with PSYC 3104. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3124 - Introduction to Molecular Biology (3 Credits)
Provides an understanding of the structure and function of genetic material, with respect to the regulation of gene expression and protein synthesis. Emphasizes eukaryotic systems and understanding the significance of contemporary laboratory-based research. Prereq: BIOL 3832 with a grade of C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a C- or higher
Typically Offered: Fall.

BIOL 3134 - Advanced Topics (1-8 Credits)
Periodic examination of current topics in the field of biology. (See Schedule Planner for current topics). Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3137 - Advanced Special Topics with Lab (1-15 Credits)
Periodic examination of current topics in the field of biology. (See Schedule Planner for current topics). Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) and BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3225 - Human Physiology (4 Credits)
Human physiology is the study of how systems within the human organism operate, interact and are regulated in order to maintain a state of homeostasis. Upon completion of the course, a student should expect to have mastery of content material related to organ systems, for example the nervous system, skeletal muscle system, and reproductive system. Also upon completion of the course, a student should expect to improve professional competencies including their ability to apply systems and scientific thinking and communication related to physiology. Note: This is a combined lecture and lab course. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2039/2088), CHEM 2061(or 2091) and 2068(or 2069/2098) with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2039/2088), CHEM 2061(or 2091) and 2068(or 2069/2098) with a C- or higher.
Typically Offered: Fall.

BIOL 3244 - Human Anatomy (5 Credits)
This course introduces structural aspects of the human body from a systems-based approach, in both lecture and laboratory. The systems addressed include the integument, skeletal, muscular, nervous, digestive, respiratory, circulatory, immune, renal, reproductive and endocrine systems. Anatomical models, microscope slides and human cadavers are used in lab. Note: This is a combined lecture and lab course. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3330 - Plant Diversity (3 Credits)
Surveys all major plant groups using evolutionary and ecological principles to interpret patterns of diversity in form and function. Topics include reproduction and life cycles, adaptations and ecological interactions, paleobotany and biogeography, classification and taxonomy and evolution. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3411 - Principles of Ecology (3 Credits)
A lecture course that examines the interrelationships between organisms and their environments. Subject matter includes organism, population and ecosystem levels of study and application to current environmental issues. The emphasis is on the underlying principles of ecology that involve all types of organisms. Note: Satisfies core ecology requirement for biology major. May not be used as upper division biology elective. No co-credit with BIOL 3412. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3413 - Ecology Laboratory (2 Credits)
Provides hands-on experiences in ecology and appreciation for using research tools to study ecological systems. Students will learn a wide range of techniques and concepts related to population, community, ecosystem, urban, and physiological ecology. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, or be concurrently enrolled in BIOL 3411 in order to enroll in this course. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Co-req: BIOL 3411 with a C- or higher

BIOL 3445 - Introduction to Evolution (3 Credits)
Introduction to the processes and patterns of evolution. Topics include: history of evolutionary thought, origin of life, evidence for evolution , phylogenetics, evolutionary genetics, natural selection and other evolutionary forces, speciation and biodiversity , evolution of sexual reproduction and social organization. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3521 - Vertebrate Biology (3 Credits)
The Subphylum Vertebrata consists of fish, amphibians, reptiles, birds and mammals--some of the most fascinating and most threatened species on earth. This course covers the evolution, taxonomy, anatomy, physiology, ecology and conservation of these organisms. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3525 - Parasitology (3 Credits)
This course is designed to provide a foundation in parasitology and to improve skills in scientific writing to students interested in biodiversity, veterinarian medicine, public health, & health care. Prokaryotes are addressed briefly; the focus of this course is the natural history of 'traditional' eukaryotic parasites. Topics include evolutionary associations of parasites with plants and animals (including humans), modes of transmission, and general life cycles. Subject matter includes basic anatomy, epidemiology, and physiology, with a brief introduction to immunology. Note: may be used as an upper-division biology elective. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 3611 - General Cell Biology (3 Credits)
Covers the structure and function of the cell including bioenergetics, membranes, secretion, respiration and the cell cycle. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3612 - Cell Biology Laboratory (3 Credits)
Laboratory course covering topics in cell and molecular biology, such as protein folding, membrane potential, organelle function, cell signaling and fertilization; as well as associated methods, including microscopy, cell culture and PCR. Basic skills are emphasized in recitation and laboratory. Prereq: General cell biology with a grade of "C-" or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3621 - Introduction to Immunology (3 Credits)
Provides an introduction to the basic concepts of immunology, including development of the immune system, innate immunity, aspects of the adaptive immune system, and the role of the immune system in disease, as well as allergies and autoimmunity. Prereq: BIOL 3611 and 3832 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and 3832 with a grade of C- or higher

BIOL 3640 - Mammalogy (4 Credits)
Lecture, laboratory, and required field trips. This course provides a general overview of the biology of mammals, including their diversity, distribution, economic importance, and other characteristics that make them of special interest to humans. Coverage will be worldwide, with special emphasis placed on the mammals of Colorado. Note: Students will not receive credit for this class if they have already received credit for BIOL 4640. Prereq: BIOL 3411 with a grade of C- or higher. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 3650 - General Microbiology (3 Credits)
Covers all aspects of the biology of microorganisms: their cellular structures and function, growth and metabolism, general and molecular genetics, diversity and interactions with other organisms and the environment (ecology). The objective is to provide students with a thorough introduction to microbiology including basic micro-biological laboratory techniques. Note: This is a combined lecture and lab course. No co-credit with BIOL 3654. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) AND CHEM 2031(or 2081), CHEM 2038(or 2088), CHEM 2061(or 2091) and 2068(or 2098) with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3651 - General Microbiology Lab (2 Credits)
Covers all aspects of the biology of microorganisms: their cellular structures and function, growth and metabolism, general and molecular genetics, diversity and interactions with other organisms and the environment (ecology). The objective is to provide students with a thorough introduction to microbiology including basic micro-biological laboratory techniques. No co-credit with BIOL 3654. Prereq or Coreq: BIOL 3650. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq/Coreq: BIOL 3650.
Typically Offered: Fall, Spring.

BIOL 3763 - Biostatistics (4 Credits)
Introduces statistical thinking in biology. Emphasizes data exploration and probability-based inference methods including estimation, testing, and confronting models with data. Concepts and examples for general and applied biology, including ecology and the health sciences. Includes exposure to statistical software. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) and MATH 1109, or MATH 1110, or MATH 1120, or 1130, or 1401, or 2411, or 2421 or 2830 with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) and MATH 1109 or MATH 1110 or MATH 1120, or 1130, or 1401, or 2411, or 2421 or 2830 with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 3804 - Developmental Biology (3 Credits)
Covers gamete development, fertilization, and embryo development including establishing body axes, tissue differentiation and organ formation. Note: Students will not earn credit for BIOL 3804 if they have earned credit for BIOL 4054 and will not earn credit for BIOL 4054 if they have earned credit for BIOL 3804. Prereq: General cell biology with a grade of "C-" or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 3832 - General Genetics (3 Credits)
Introduces molecular, classical, developmental and population genetics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3840 - Independent Study (1-3 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Prereq: Students must have completed one year of general biology with a grade of “C-” or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 3939 - Internship (1-3 Credits)
Approved internships will provide opportunities to apply classroom knowledge in a professional environment and expand the student's knowledge of biology. Associated coursework includes scientific reading/writing and presentation(s). Prereq: BIOL 2051 or 2095 and BIOL 2061 or 2097 with a C or higher AND have junior level standing with a 2.75 GPA. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: BIOL 2051 or 2095 and BIOL 2061 or 2097 with a C or higher AND have junior level standing with a 2.75 GPA.
Typically Offered: Fall, Spring, Summer.

BIOL 4024 - Introduction to Biotechnology (3 Credits)
Introduces aspects of biotechnology within a historical context, including medical, forensic, agricultural and microbial biotechnology. Addresses principles behind state-of-the-field techniques in recombinant DNA technology, bioinformatics, proteomics and genomics. Biotechnology regulations and ethics will also be discussed. Prereq: BIOL 3832 with a C- or higher. Cross-listed with BIOL 5024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a C- or higher

BIOL 4050 - Advanced Biology Topics (1-8 Credits)
Examines current topics in the field of biology. Topics vary from term to term. See Schedule Planner for current topics. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with BIOL 5050. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 4052 - Advanced Ecology (3 Credits)
This combination seminar and lecture course focuses on state-of-field knowledge, current theories and recent models in selected areas of ecology, such as theoretical ecology, evolutionary ecology, population biology and ecosystems ecology. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5052. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4053 - Disease Ecology (3 Credits)
The study of the underlying principles that influence the spatio-temporal patterns of infectious disease in environments. Students will apply ecological theories about concepts such as biodiversity, trophic interactions, landscape structure, and nutrient cycling to the study of disease. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5053. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4055 - Virology (3 Credits)
This is an upper level undergraduate/graduate class providing an in-depth study of the history of virology, different types of viruses, viral disease, research to combat viral infections, and different uses of viruses in biotechnology. Note: Students will not earn credit for this course if they have already earned credit for BIOL 4051 or BIOL 5051. Prereq: BIOL 3611 with a grade of C- or higher. Cross-listed with BIOL 5055. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4064 - Cell Biology of Disease (3 Credits)
Builds on the foundations laid in the prerequisite courses. How alterations in membrane transport, autophagy, mitochondria, lysosomes, cilia, unfolded protein response and autophagy lead to major human diseases. A major emphasis is the control and integration of cellular activities. Prereq: General cell biology with a C- or higher. One semester of Biochemestry is strongly recommended for optimal student success. Cross-listed with BIOL 5064. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4125 - Molecular Biology Laboratory (3 Credits)
Provides hands-on experiences in molecular biology and an appreciation for using the tools of molecular biology to study biological systems. Emphasis is placed on DNA cloning, PCR, mRNA and protein detection in the context of gene editing. Experimental design and the theories underlying the techniques are also discussed. Prereq: BIOL 3124 with a C- or higher or Coreq: BIOL 3124. Cross-listed with BIOL 5125. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher or Coreq: BIOL 3124
Typically Offered: Spring.

BIOL 4126 - Molecular Genetics (3 Credits)
Examines molecular techniques and their application to experimental genetics, specifically organization and mapping of genomes, application and model systems in defining hereditary components of disease, and mechanisms of identifying mutations and their implications for disease. Also addresses application of recombinant DNA technology. Prereq: Completion of Introduction to Molecular Biology with a C- or higher is required in order for students to enroll in this course. Cross-listed with BIOL 5126. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher

BIOL 4128 - Topics in Molecular Biology (3 Credits)
Literature-based course examining the regulation of gene expression in eukaryotic systems, as well as contemporary recombinant DNA technology and applications of molecular cloning techniques. Prereq: BIOL 3124 with a C- or higher; biochemistry strongly recommended. Cross-listed with BIOL 5128. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3124 with a C- or higher

BIOL 4134 - Human Genetics (3 Credits)
Advanced survey of the current status of the field. Emphasis on understanding, diagnosis and treatment of genetic disease and on the impact of molecular biology on human genetics. Cross-listed with 5134. Prereq: General genetics with a grade of "C-" or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 with a grade of C- or higher

BIOL 4144 - Medical Microbiology (3 Credits)
Provides an understanding of the relationship between pathogenic organisms and their host. Emphasis is placed on the area of medical bacteriology, with attention given to mechanisms of pathogenesis, genetics of disease, serology and treatment. Prereq: general microbiology with a grade of "C-" or higher. Cross-listed with BIOL 5144. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3654 with a grade of C- or higher

BIOL 4154 - Conservation Biology (3 Credits)
Basic concepts and theories in ecology, population biology and genetics as they apply to issues relating to the preservation of biodiversity, such as the genetics of small populations, captive propagation, restoration ecology and the design of nature reserves. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5154. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4165 - Neurobiology (3 Credits)
Overview of neuroscience, covering the cellular basis of neuronal activity, sensory structures and the structure and function of the human brain. Prereq: BIOL 3611 and PSYC 2220 with a C- or higher OR BIOL 3225 with a C- or higher. Cross-listed with BIOL 5165. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and PSYC 2220 with a C- or higher OR BIOL 3225 with a C- or higher.

BIOL 4225 - Genomics and Bioinformatics (3 Credits)
Explores how genome-wide data are collected and analyzed. Example applications include human disease, microbial evolution, ecological genomics, and parasite drug resistance. Students implement projects based on real DNA sequencing data. Prereq: BIOL 3832 with a C- or higher.Cross-listed with BIOL 5225. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 3832 with a C- or higher.

BIOL 4250 - Mechanisms of Animal Behavior (3 Credits)
The proximate and ultimate mechanisms of animal behavior are analyzed using comparative animal examples from the scientific literature. Proximate mechanisms include genetic and physiological processes. Ultimate mechanisms include the role of natural and sexual selection in the evolution of behavior. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Genetics and human physiology are recommended. Cross-listed with BIOL 5250. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.

BIOL 4335 - Plant Structure and Development (4 Credits)
Inclusive and in-depth study of functional anatomy and biology of vascular plants. Topics include: plant biochemistry, biology of the plant cell, simple and complex tissues, secretory structures, functional anatomy, primary and secondary growth, angiosperm reproduction and life cycles, development and additional topics. Responsibilities include lectures, lab, and potential field trips. Course must be taken with both lecture and lab together. Prereq: One year of General Cell Biology (BIOL 3611) with a grade of "C-" or higher. Cross-listed with BIOL 5335. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher
Typically Offered: Spring.

BIOL 4345 - Flora of Colorado (4 Credits)
Inclusive and in-depth study of functional anatomy and biology of vascular plants. Topics include: plant biochemistry, biology of the plant cell, simple and complex tissues, secretory structures, functional anatomy, primary and secondary growth, angiosperm reproduction and life cycles, development and additional topics. Responsibilities include lectures, lab, and potential field trips. Course must be taken with both lecture and lab together. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5345. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4415 - Applied Microbial Ecology (3 Credits)
An in-depth study of ecology as it relates to microorganisms; abiotic and biotic interactions within microbial populations in macro- and microhabitats; and the role of microorganisms in influencing and responding to environmental conditions in natural and anthropogenic ecosystems. Emphasis is placed on how the ecology of microorganisms impacts how we engage with our environment. Prereq: General microbiology with a grade of "C-" or higher. Cross-listed with BIOL 5415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3654 with a grade of C- or higher
Typically Offered: Fall, Spring.

BIOL 4425 - Biogeography (3 Credits)
An in-depth study of biological populations through analysis of geographic distribution patterns in space and time. Emphasis on how biogeography informs studies of evolution and ecology and on applied studies in conservation, sustainability, epidemiology, and disease dynamics. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5425. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4430 - Introduction to Spatial Ecology (3 Credits)
Focuses on patterns of life and ecological interactions in space. Emphasis on drivers of patterns, practical application of spatial ecology software, programming, and introductory spatial statistics on the quantification of patterns. Main topics: Scale and scaling, pattern development, detecting and characterizing patterns, temporal dynamics, and implications of spatial structure to conservation biology, resilience, and ecosystem functioning. Cross-listed with BIOL 5430. Prereq: BIOL 3411 with C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3411 with C- or higher.

BIOL 4460 - Environmental Toxicology (3 Credits)
Text and literature-based course provides students with background knowledge concerning environmental toxins, the nature and extent of environmental contamination, and toxicant effects on individual organisms and populations. Prereq: BIOL 3611 with a grade of C- or higher. Cross-listed with BIOL 5460. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4464 - Exercise Physiology (3 Credits)
This course addresses the dynamic physiological changes associated with exercise. Where human physiology addresses physiological processes at rest, this course explores how the cardiovascular, respiratory, nervous and endocrine systems support increased energy transfer as skeletal muscle becomes more active. Prereq: Human Physiology (BIOL 3225 or equivalent) with a grade of C- or higher. Cross-listed with BIOL 5464. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3225 with a grade of C- or higher

BIOL 4475 - Mechanisms of Human Pathology (3 Credits)
Studies physiological, cellular and biochemical processes in human diseases. Mechanisms of inflammatory diseases, infectious diseases, neoplastic diseases, and others will be examined. Prereq: BIOL 3225 or BIOL 3244 with a grade of C- or higher. Cross-listed with BIOL 5475. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: BIOL 3225 or BIOL 3244 with a C- or higher

BIOL 4494 - Population and Evolutionary Genetics (3 Credits)
Introduces the genetic processes underlying evolutionary change in microbial, plant and animal populations. Topics include: sources of variation, Hardy-Weinberg equilibrium, population genetic structure, natural selection and other evolutionary forces, quantitative genetics and molecular phylogenetics. Emphasis on experimental data. Prereq: Completion of General Genetics and Introduction to Evolution with a C- or higher is required in order for students to enroll in this course. Cross-listed with BIOL 5494. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3832 and BIOL 3445 with a C- or higher

BIOL 4550 - Cell Signaling (3 Credits)
Lecture by faculty and student presentations cover mechanism of hormones and regulation of various cellular processes through second messenger systems. Prereq: General cell biology with a grade of "C-" or higher; one semester of biochemistry recommended. Cross-listed with BIOL 5550. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4622 - Topics in Immunology (3 Credits)
An in-depth study of immunological concepts. Topics will vary from semester to semester and may range from specifics of immune cell responses to tolerance and autoimmunity. Delivery will include lecture, student presentations, and discussion. Prereq: BIOL 3621 with a C- or higher. Cross-listed with BIOL 5622. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3621 with a C- or higher

BIOL 4634 - Biology of Cancer (3 Credits)
Cancer is the second leading cause of death in the United States. This course offers an overview of recent research into the causes, treatments and possible prevention of cancer. Includes a detailed look at the mechanisms of action of various oncogenes. Prereq: BIOL 3611 and BIOL 3832 with a C- or higher. Cross-listed with BIOL 5634. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 and BIOL 3832 with a C- or higher.

BIOL 4644 - Advanced Human Anatomy Laboratory (2 Credits)
Advanced laboratory course in human anatomy. In-depth look at the structural aspects of the human body, emphasizing function. Models, microscope slides, and visual media will supplement cadaver-based dissections. Prereq: One year of general biology and human anatomy with a grade of "C-" (2.0) or higher. Cross-listed with BIOL 5644. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3244 with a C- or higher.
Typically Offered: Fall, Spring.

BIOL 4674 - Endocrinology (3 Credits)
This systematic survey of the endocrine system looks at the cellular basis and biochemical characteristics of individual endocrine tissues. Their function in the regulation of other endocrinological, physiological, and behavioral events is analyzed. The course emphasizes the human system and complements studies in physiology, behavior and neurobiology. Prereq: BIOL 3611 with a grade of C- or higher. Students will not earn credit for this course if they have already earned credit for BIOL 4674. Cross-listed with BIOL 5674. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3611 with a C- or higher

BIOL 4780 - Aquatic Ecology (3 Credits)
This course explores the physical, chemical, and biological (including human) properties of aquatic ecosystems, and how the interrelationships between these properties define and influence advanced ecological processes. Special focus is given to lakes, reservoirs, wetlands, streams, rivers, and groundwater. Learning is facilitated through lectures, discussions, student presentations, laboratory and data exercises, and periodic (often virtual) field excursions. Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher. Cross-listed with BIOL 5780, ENVS 4780, and ENVS 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher.

BIOL 4815 - Structural Biology of Neurodegenerative Diseases (3 Credits)
Advanced course in Biochemistry/Biophysics. Principles of Protein Folding, Structure-Function Relationship, and spectroscopic techniques related to characterization of these processes as applied to neurodegenerative diseases such as Parkinson's and Alzheimer's. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4815, CHEM 5815, and BIOL 5815. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4825 - Biochemistry of Metabolic Disease (3 Credits)
Advanced course in biochemistry. An expanded study of selected topics in metabolism and how they relate to diseases, including inflammation, diabetes, obesity, and rare genetic disorders. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4825, CHEM 5825, and BIOL 5825. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4835 - Biochemistry of Gene Regulation and Cancer (3 Credits)
Explores the biochemical and molecular aspects of cancer biology. Topics include DNA mutations and repair, gene regulation, oncogenes and tumor suppressors, stem cells and differentiation, and cancer drug development. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 4835, CHEM 5835, and BIOL 5835. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331

BIOL 4840 - Independent Study (1-6 Credits)
Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s). Note: Registration by special processing form only. Prereq: Students must have completed one year of general biology with a grade of "C-" or higher and must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Fall, Spring, Summer.

BIOL 4880 - Directed Research (1-6 Credits)
A student designed lab or field-based investigation that involves data collection, and that makes an original intellectual or creative contribution to the discipline. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

BIOL 4910 - Field Studies (3 Credits)
Field studies of individuals, populations and communities comprising a specified ecosystem. Emphasis on field identification of vascular plants and vertebrate animals. Topics include the physical environment, biotic and abiotic interactions, life history, ecological adaptations and biogeography. Note: Lectures and a week-long field trip. Prereq: Students must have completed BIOL 3411(Principles of Ecology) with a C- or higher, in order to enroll in this course. Cross-listed with BIOL 5910. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: BIOL 3411 with C- or higher.

BIOL 4974 - Advanced Evolution (3 Credits)
A capstone course that draws upon concepts from all fields of biology. Topics include the fossil record, mass extinctions, the historical development of the modern synthesis, principles and mechanisms of evolution, current viewpoints and controversies. Prereq: BIOL 3445 and 3832 with a C- or higher. Cross-listed with BIOL 5974. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 3445 and 3832 with a grade of C- or higher

BIOL 4990 - Undergraduate Research Seminar (1 Credit)
Introduces research in the biological sciences. Students read current scientific literature, attend related seminars and participate in discussions. This course offers students a chance to interact with visiting scientists, who will present state-of-the-field biological research in a seminar setting. Prereq: BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), BIOL 3411, BIOL 3445, BIOL 3611 and BIOL 3832 with a C- or higher. Restriction: Restricted to Senior standing or higher with an overall GPA of 3.0 or higher. Cross-listed with BIOL 6655. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq:BIOL 2010(or 2061/2097/2030), BIOL 2011(or 2081/2098/2031), BIOL 2020(or 2051/2095/2040), BIOL 2021(or 2071/2096/2041), BIOL 3411,3445,3611 and BIOL 3832 with a C- or higher. Restriction: Senior standing or higher with GPA of 3.0 or higher.

Business (BUSN)

BUSN 1100 - College Success (1 Credit)
This course features skills, strategies, resources, dispositions, and behaviors that lead to success as a college student. In addition to practicing key academic proficiencies, such as writing, critical thinking, and analysis, students will learn to navigate the university system and utilize its support mechanisms and offices. BUSN 1100 will also feature a number of engaged learning strategies, including service learning, common intellectual experiences across sections, out-of-class engagement, self-reflection, and collaborative learning. The goal is to create capable, confident, and conscientious citizens of the CU Denver community. Restriction: Restricted to freshman level Business School majors. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to freshman level Business School majors.
Typically Offered: Fall, Spring.

BUSN 1110 - Intro to Investment Services Careers (1 Credit)
Open to all majors! Provides a comprehensive overview of careers in the Investment Services industry. Emphasis will be on interactions with industry professionals to provide hands-on knowledge and opportunities for in-depth discussion.Students are required to participate in a site visit to an investment services company during the course. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

BUSN 1200 - Career and Professional Development (3 Credits)
This first year course develops a student's professional skills, providing knowledge on key factors for early and long-term career success. Through applied learning and career-oriented experiences, the course covers: career and major exploration, student resources, resume writing, interview skills, business communications, professional etiquette, emotional intelligence, time management, ethical behavior, and workplace expectations. Students will have opportunities to develop their own professional network with business leaders as new members of the Business School. Restriction: Restricted to freshman level Business School majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to freshman and sophomore level Business School majors.
Typically Offered: Fall, Spring.

BUSN 2110 - Cultivating Emotional Intelligence (1 Credit)
This course delves into the social and emotional skills that sustain positive relationships at school and at work. It highlights the foundational and related skills of empathy and "emotional intelligence," also known as EQ, which refers to the skills of identifying and regulating our own feelings, tuning into the feelings of others, and understanding their perspectives, and using this knowledge to guide us toward constructive social interactions. We'll assess current emotional and social intelligence skills, and you will discover the Foundational 4 Quadrants of Emotional and Social Intelligence (ESI) to understand, use and manage emotions. Topics covered in this course apply to student academic success and personal and professional development. Restrictions: Restricted to undergraduate majors within the Business School. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors within the Business School.
Typically Offered: Fall, Spring.

BUSN 3110 - Career and Professional Development (1 Credit)
This course develops a student's academic and professional skills, providing knowledge on key factors for early and long-term academic and career success. Through applied learning and career-oriented experiences, the course covers: career and major exploration, student resources, resume writing, interview skills, business communications, professional etiquette, and workplace expectations. Students will have opportunities to develop their own professional network with other students and business leaders as new members of the Business School. Topics covered in this course apply to student professional development. This is a business core course therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

BUSN 4100 - Empowering Women in Business (3 Credits)
This course focuses on empowering women to advance in business. Focus on understanding gender equity issues, developing strong emotional intelligence and problem-solving skills and provides networking opportunities. Students will develop an understanding of the practical issues women face in business and effective skills to overcome roadblocks to advancement. Restriction: Restricted to students with Junior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall.

BUSN 4950 - Special Topics (1 Credit)
Research methods and results, special topics and professional development in business. Prerequisites vary according to topic and instructor requirements.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

Business Analytics (BANA)

BANA 2010 - Business Statistics (3 Credits)
Basic principles of probability and statistics with applications in business. Includes descriptive statistics, probability and probability distributions, data collection, sampling distributions, statistical inference, simple regression and the use of a computer to perform statistical analysis. Students are required to present their analyses in written and/or oral form and defend their conclusions. This is a business core course. Therefore a grade of a 'C-' or better must be earned to satisfy Business graduation requirements and prerequisites for other business courses. Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher. Restriction: Restricted to undergraduate students at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060, or MATH 1070, or MATH 1080, or MATH 1109, or MATH 1110, MATH 1130, or MATH 1401 with a grade of C- or higher.
Restriction: Restricted to undergraduate students at a sophomore standing or higher.

BANA 3000 - Operations Management (3 Credits)
Introduces the concepts and methods commonly used in manufacturing and service operations. Topics include aggregate planning, inventory control, scheduling, quality control, and linear programming. This is a business core course. Therefore a grade of a 'C' or better must be earned to satisfy Business graduation requirements. Prereq: BANA 2010 and ACCT 2200 both with a grade of 'C-' or higher. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010 and ACCT 2200 both with a grade of 'C-' or higher.
Restriction: Restricted to undergraduate students at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

BANA 4110 - Business Analytics Process (3 Credits)
This course introduces the processes, tools, and techniques essential to Business Analytics. Students will learn about the business analytics life cycle. Along the way, students will learn about database access tools, and extracting, transforming, and loading data sets (ETL). This is followed by exploratory data analysis (EDA). Students will learn fundamental programming concepts and common syntax for the Python programming language to construct models and propose business solutions. Throughout this process a variety of data visualization methods will be used, and the use of clear and impactful data storytelling will be emphasized. Prereq: BANA 2010. Restriction: Restricted to students with Junior status. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010. Restriction: Restricted to students with junior status.
Typically Offered: Fall.

BANA 4120 - Forecasting Techniques (3 Credits)
This course will explain and utilize popular time series techniques, as well as cross-sectional forecasting techniques. Students will learn forecasting methodologies applicable to marketing, finance, accounting, human resources management, as well as supply chain and production management decision-making. This course focuses on practical applications of forecasting techniques, choosing and comparing appropriate methods, and applying the results to workplace situations. Students will utilize Excel for data-based forecasting tasks, as well receive some exposure to utilizing R and SAS analytics software packages. Other topics may be covered, as time and student interest allows. Prereq: BANA 2010. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BANA 2010.
Typically Offered: Fall, Spring.

BANA 4840 - Independent Study (3 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

BANA 4950 - Special Topics in Business Analytics (3 Credits)
Course offered on an irregular basis for the purpose of presenting new subject matter in Business Analytics. Prereq: Will vary depending upon the particular topic and instructor. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Business Law (BLAW)

BLAW 3050 - Business Law and Ethics (3 Credits)
Students are taught to identify & resolve legal and ethical issues. Topics include contracts, torts, criminal law, constitutional law, business organizations,employment law, intellectual property and real property law. This is a business core course therefore a grade of "C" or better must be earned to satisfy Business graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

BLAW 3100 - Legal and Ethical Implications of Risk (3 Credits)
Topics include contracts, torts, constitutional law, intellectual property, agency, business organizations, employment law, and real property law. Special focus is placed on the relationship between insurance and risk and the topics covered. May be taken in lieu of BLAW 3050. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

BLAW 4121 - Legal and Ethical Implications of Risk (3 Credits)
Skills in legal and factual analysis and the application of ethical theories are advanced and refined through cases. Topics: insurance law, personal property and intellectual property law,agency, business entities, securities,employment law, and consumer law. Focus is placed on the relationship between insurance, risk and the covered topics. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring, Summer.

BLAW 4140 - Negotiation Skills/Property: Effective Strategies (3 Credits)
Course covers real and personal property law, including ownership, title, landlord/tenant, easements, environmental law, and zoning. Emerging issues in intellectual property are also reviewed, including U. S. law and international treaties and agreements. Negotiation techniques through role-playing are emphasized. NOTE: This course is an elective course and my not be used to fulfill the CORE BLAW 3050 course. Meets concurrently with MGMT 4140. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Business Minor for non-business majors (BMIN)

BMIN 1000 - Introduction to Business (3 Credits)
The business and economic landscape is introduced illustrating the challenges and opportunities in today's business environment. A foundation in traditional business disciplines is introduced including the principles and terminology employed in Marketing, Management, Finance, Accounting, Operations, and Economics. This course is cross-listed with MGMT 1000. Restriction: Students enrolled in the Business School are not eligible for this course. Note: Students seeking a Minor in Business Fundamentals are encouraged to enroll in BMIN 1000 as their first course. However, BMIN 1000 may be taken as a co-requisite with BMIN 3001, 3002 or 3003 or ENTP 3000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course.

BMIN 1010 - Introduction to Business -- Career Planning (3 Credits)
Students will explore their best career choices based on assessments and their personality type. They will learn what strengths they bring to a team and to their individual management style utilizing the Myers Briggs Type Indicator and Strong Interest Inventory assessments. Topics covered include: career exploration, career and internship planning, personality styles and strengths, working with executives, corporate culture overview, business trends and news, and analysis of Fortune 100 companies. Supplemental topics include: resume writing, effective interviewing, time management, business writing and hiring trends. Restriction: Students enrolled in the Business School are not eligible for this course. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course

BMIN 3001 - Fundamentals of Management and Marketing (3 Credits)
Comprised of two modules focusing on essential concepts of Management and Marketing: 1) Management: Including organizational behavior concepts, leadership, management skills and methods and team dynamics 2) Marketing: Students will develop a new product marketing plan including, industry and market research, market segmentation, marketing mix planning and implementation strategies. Restriction: Students enrolled in the Business School are not eligible for this course. Coreq: BMIN 1000 or MGMT 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Co-req: BMIN 1000 or MGMT 1000

BMIN 3002 - Fundamentals of Accounting and Finance (3 Credits)
Comprised of two modules focusing on essential concepts of 1) Accounting: including the use of information in financial reports and in making business decisions, and 2) Finance: including financial markets, capital structure, time-value of money, valuation and capital budgeting. Restriction: Students enrolled in the Business School are not eligible for this course. Coreq: BMIN 1000 or MGMT 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Co-req: BMIN 1000 or MGMT 1000

BMIN 3004 - Principles of Strategic Management (3 Credits)
Students will examine the critical issues related to running sustainable businesses. Using the strategic management model as a framework, the course focuses primarily on developing and implementing corporate strategy. Topics covered include mission, vision and values; corporate social responsibility; competitive analysis; leveraging core competencies; developing a business model, and creating value. Supplemental topics include how to create competitive advantage through innovation, choosing an appropriate legal business entity, and managing risk. This is a capstone course and synthesizes key concepts from other Cohort Business Minor courses including entrepreneurship, accounting & finance, management, and marketing. Restriction: Students enrolled in the Business School are not eligible for this course. Prereq: BMIN 3001, BMIN 3002, Junior-Level Standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students enrolled in the Business School are not eligible for this course Prereq: BMIN 3001, BMIN 3002, Junior-Level Standing

Chemistry (CHEM)

CHEM 1000 - Foundations for General Chemistry (3 Credits)
This is a lecture- only course intended for students pursuing a degree in science or a health-related field. The course is designed for students who have never had a chemistry course or who have not taken general chemistry in 5+ years. Topics include the classification of matter, the Metric system, dimensional analysis, atomic theory and the structure of atoms, periodic relationships, energy and temperature, gas laws and the kinetic molecular theory, compounds and nomenclature of inorganic compounds, the mole, stoichiometry, types of chemical reactions, balancing equations, electron configurations, and chemical bonding. Enrollment in this course is strongly encouraged prior to enrollment in Chem 2031 if the student does not have a strong and recent background in general chemistry. Note: College Algebra or the equivalent is strongly recommended for optimal student success. Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

CHEM 1115 - Chemistry Content (1-3 Credits)
Covers content areas of undergraduate chemistry. Topics include periodicity; the mole and chemical bonding; the kinetic theory and states of matter; chemical reactions; solutions and chemical equilibria. Note: Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 1474 - Core Chemistry: Chemistry for Everyday (4 Credits)
Focuses on the common household chemicals that affect us on a daily basis. Students explore current topics in chemistry and the underlying chemistry of nuclear power, plastics, sunscreens, food, acid rain, etc. Home-based laboratory experiments with safe, common substances. No co-credit: Students may not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 1494 - Forensic Chemistry (4 Credits)
This one semester chemistry lecture and laboratory course is designed to engage a non-science major through the high-interest topic: criminal investigations. In this course, using the theme of forensic science students will be introduced to a basic understanding of chemistry, the physical and chemical properties of matter, simple types of chemical reactions and equations, and molecular structure of drugs and biomolecules. Note: Two years of high school science and one year of high school algebra are strongly recommended for optimal success. Students will not receive credit for this course if they have already received credit for CHEM 2031 and CHEM 2061. Term offered: spring, summer. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Spring, Summer.

CHEM 1575 - Chemistry: History and Policies (4 Credits)
A study of the building blocks of all matter: chemicals. A focus on how the study of chemistry began and how it has changed over the course of history. The course explores how chemistry has impacted man from the earliest times: from the Bronze Age to the present and beyond. Students learn about the first use of manufactured chemical substances in history and the progression of chemical knowledge throughout history. Students also study how certain substances introduced into the environment throughout history have affected the environment and what policies have been put in place to control or remediate the release of these substances. Eight home#based laboratory experiments will be performed during the semester. High school algebra is strongly recommended preparation for this course. Math concepts critical for this course include basic operations#addition, subtraction, multiplication and division#, order of operations, exponents, square roots and the ability to rearrange and solve algebraic equations. Term offered: fall. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 2031 - General Chemistry I (3 Credits)
This is the first of a two semester sequence designed for students pursuing a degree in science or a health related field. Chem 2031 is designed for students who have recently completed high school chemistry or Chem 1000 with a C- or better. Note: Non- science majors should review the course description for Chem 1474 as an alternative, non-majors science CU Denver Undergraduate Core course, with lab credit. Topics covered include the classification of matter, the Metric system, dimensional analysis, atomic theory and the structure of atoms, periodic relationships, empirical formulas, thermochemistry, gas laws and the kinetic molecular theory, compounds and nomenclature of inorganic compounds, the mole, balancing equations, stoichiometry, types of chemical reactions, solution stoichiometry and dilutions, electron configurations, chemical bonding, Lewis Dot Theory, Valence Shell Electron Pair repulsion Theory, and other topics as time allows. This course is a prerequisite or co-requisite for General Chemistry 1 Lab, Chem 2038. No co-credit with CHEM 2081. Note: a beginning course for science majors, medical technologists, pre-medical and pre-dental students. It is strongly recommended that students have taken CHEM 1000 and MATH 1110 or their high school equivalents to be adequately prepared to succeed in this course. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2038 - General Chemistry Laboratory I (1 Credit)
Laboratory course designed to accompany Chem 2031. Topics include gravimetric analysis, statistical analysis, stoichiometry, Avogadro's number, thermochemistry, atomic spectroscopy, paper chromatography, and gas laws. No co-credit with CHEM 2088 and CHEM 2039. Coreq: CHEM 2031 or CHEM 2081. Term offered: fall, spring, summer. Max hours: 1 Credit. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2039 - Majors General Chemistry I Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in General Chemistry I (CHEM 2031) or the companion Majors General Chemistry I course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Majors General Chemistry I Laboratory is distinguished from the regular General Chemistry Laboratory by smaller sections, and greater access to specialized techniques, open ended experiments, instrumentation, and introduction to computational chemistry. Note: This course is intended for Chemistry and Biochemistry majors and minors. Note: No co-credit with CHEM 2038. Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry and Biochemistry majors and minors. Typically offered: fall, spring, summer. Max hours: 2 Credits.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry and Biochemistry majors and minors (BCHM-CERU, BICM-ADL, BICM-BS, BICM-MIN, CHEM-ADL, CHEM-BS, CHEM BS2, CHEM-MIN).
Typically Offered: Fall, Spring, Summer.

CHEM 2061 - General Chemistry II (3 Credits)
This is a continuation of Chem 2031 and is the second course of a two semester sequence designed for students pursuing a degree in science or a health related field. CHEM 2061 builds upon the understanding of chemistry rooted in the molecular nature of matter and change from General Chemistry I and expands to include topics such as intermolecular forces, solution chemistry, kinetics, chemical equilibrium, acid-base chemistry, buffer chemistry, solubility, thermodynamics and time permitting, electrochemistry. Specific topics include: the use of bonding theories to explain the relationships between atomic structure, molecular shape, and macroscopic properties of matter including boiling point, vapor pressure, surface tension, viscosity, and capillarity; the understanding of molecular structure to explain the energetics of solution formation as well as vapor pressures of pure liquids and solutions; the application of rates of reactions to define the state of equilibrium; the application of problem solving techniques for systems at equilibrium to acid/base and solubility chemistry; and the thermodynamic underpinnings of chemical reaction rates and the spontaneous conversion of chemical species to attain a state of dynamic equilibrium. This course is a prerequisite or co-requisite for General Chemistry II Lab, Chem 2068. Prereq: CHEM 2031 or 2081 with a C- or higher. No co-credit with CHEM 2091. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prereq: CHEM 2031 or 2081 with a C- or higher
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2068 - General Chemistry Laboratory II (2 Credits)
Laboratory course designed to accompany Chem 2061. Topics include colligative properties, spectroscopic analysis, kinetics, equilibrium, acid-base chemistry, titrations, and qualitative analysis of metal cations. No co-credit with CHEM 2098 and CHEM 2069. Prereq: CHEM 2038 or CHEM 2039 or 2088 with a C- or higher. Term offered: fall, spring, summer. Max hours: 2 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1.
Grading Basis: Letter Grade
Prereq: CHEM 2038 or CHEM 2039 or CHEM 2088 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab; GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab.
Typically Offered: Fall, Spring, Summer.

CHEM 2069 - Majors General Chemistry II Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in the Majors General Chemistry II (CHEM 2061) course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Majors General Chemistry II Laboratory is distinguished from the regular General Chemistry Laboratory by greater access to specialized techniques and instrumentation, open ended experiments, and a strong emphasis on scientific writing. Students are introduced to college-level laboratory exercises at a faster pace than traditional General Chemistry laboratory coursework, such that at the end of this course, they are ready to take on more sophisticated work. Prereq: CHEM 2031, CHEM 2038, or CHEM 2039 with a C- or higher. Coreq: CHEM 2061 or CHEM 2091. Restriction: Restricted to Chemistry and Biochemistry majors and minors. No co-credit with CHEM 2068. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2038, or CHEM 2039 with a C- or higher. Coreq: CHEM 2061 or CHEM 2091. Restriction: Restricted to Chemistry and Biochemistry majors and minors (BCHM-CERU, BICM-ADL, BICM-BS, BICM-MIN, CHEM-ADL, CHEM-BS, CHEM BS2, CHEM-MIN).
Typically Offered: Fall, Spring.

CHEM 2081 - Honors General Chemistry I (3 Credits)
Topics include gas laws, thermochemistry, the quantum mechanical model of the atom, periodic properties, bonding and molecular geometry and intermolecular forces. Prepares students to take upper division chemistry courses. Honors section: Course assumes knowledge of stoichiometry and basic atomic structure. Note: Students may not receive credit for this course if they have already received credit for CHEM 2031. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Working knowledge of high school algebra and advanced high school chemistry are required. Restriction: Restricted to Chemistry Honors students (CH01). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Chemistry Honors students.
Typically Offered: Fall.

CHEM 2088 - Honors General Chemistry I Laboratory (2 Credits)
Laboratory experiments on topics covered in CHEM 2031 or CHEM 2081, gaining experience in observing, recording, and interpreting physical and chemical phenomena. Offers smaller sections and greater access to specialized techniques, open ended experiments, and instrumentation, requiring a faster pace and more sophisticated work. Note: Students may not receive credit for this course if they have already received credit for CHEM 2038. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Coreq: CHEM 2031 or CHEM 2081. No co-credit with CHEM 2038 and CHEM 2039. Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Coreq: CHEM 2031 or CHEM 2081. Restriction: Restricted to Chemistry Honors students.
Typically Offered: Fall.

CHEM 2091 - Honors General Chemistry II Lecture (3 Credits)
Continuation of CHEM 2081. Additional topics may include kinetics, equilibria and thermodynamics. Note: Students may not receive credit for this course if they have already received credit for CHEM 2061. Note: Admission into specific CU Denver program or consent of the instructor is required. Prereq: CHEM 2081 or 2031 with a C- or higher. Restriction: Restricted to Chemistry Honors students (CH01). No co-credit with CHEM 2061. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2081 or 2031 with a C- or higher Restriction: Restricted to Chemistry Honors students (CH01)
Typically Offered: Spring.

CHEM 2098 - Honors General Chemistry II Laboratory (2 Credits)
Students perform laboratory experiments on topics covered in General Chemistry II (CHEM 2061) or the companion Honors General Chemistry II course. Students gain experience in observing, recording, and interpreting physical and chemical phenomena. Honors General Chemistry II Laboratory is distinguished from the regular General Chemistry Laboratory by smaller sections, and greater access to specialized techniques, open ended experiments, and instrumentation. Students use the laboratory skills they developed in Honors General Chemistry I Laboratory to work independently with a special emphasis on recording, interpreting, and expressing data, chemical safety, the scientific literature, innovation in the laboratory, and presentation of scientific information in oral and poster formats. Prereq: Admission into specific CU Denver program or consent of instructor is required to enroll. Prereq: CHEM 2038 or CHEM 2088. Coreq: CHEM 2091 or CHEM 2061. Restriction: Restricted to Chemistry Honors Students. No co-credit with CHEM 2068 and CHEM 2069. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2038 or CHEM 2088 Coreq: CHEM 2091 or CHEM 2061
Restriction: Restricted to Chemistry Honors Students
Typically Offered: Spring.

CHEM 2300 - Nutritional Chemistry (3 Credits)
Introduces nutrition intended primarily for majors in nursing, physical therapy, physical education. Topics include structure and metabolism of carbohydrates, lipids and proteins, functions of vitamins and minerals and food constituents. Prereq: CHEM 1000 or CHEM 1474 or CHEM 2031 or CHEM 2081 with a C- or better. Typically offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 1000 or CHEM 1474 or CHEM 2031 or CHEM 2081 with a C- or better.
Typically Offered: Summer.

CHEM 2600 - Introductory Topics in Chemistry (1-3 Credits)
This course is designed primarily for non-chemistry majors. Students will explore a special topic related to chemistry or biochemistry. A description of topics to be covered in the current semester is maintained on the Chemistry department website. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CHEM 2840 - Independent Study: CHEM (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

CHEM 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: 15 hours of 2.75 GPA. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CHEM 3011 - Inorganic Chemistry (3 Credits)
The fundamentals of inorganic chemistry, including: atomic, molecular and crystal structures; the energetics of reactions, acid-base interactions; and the chemistry of main group and transition metal elements, including coordination and organometallic chemistry. Prereq or Coreq: CHEM 3421 or 3491 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3421 or CHEM 3491 with a C- or higher
Typically Offered: Spring.

CHEM 3018 - Inorganic Chemistry Laboratory (2 Credits)
Combines theoretical concepts with hands-on laboratory experience and introduces students to modern inorganic chemistry. Experiments cover both main group and transition metal chemistry with an emphasis on synthesis, characterization, and application of inorganic compounds. Prereq or Coreq: CHEM 3011 with a C- or higher. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3011 with a C- or higher
Typically Offered: Spring.

CHEM 3111 - Analytical Chemistry (3 Credits)
Topics include sampling, volumetric analyses, instrumental analyses and statistical treatment of data. Note: Lecture course for chemistry, biology, medical technology and environmental students. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall.

CHEM 3118 - Analytical Chemistry Laboratory (2 Credits)
CHEM 3118 provides a strong background in those chemical principles that are particularly important to analytical chemistry, such as the ability to obtain high-quality analytical data. Students gain experience with techniques of sampling and analysis, including an introduction to instrumental methods. Additionally, students develop the skills needed to solve analytical problems in a quantitative manner, with the aid of spreadsheet tools. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Note: Laboratory course to be taken concurrently with CHEM 3111. Prereq: CHEM 2068 or CHEM 2098 with a C- or higher. Coreq: CHEM 3111 or CHEM 3481. Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2068 or CHEM 2098 with a C- or higher. Coreq: CHEM 3111 or CHEM 3481.
Typically Offered: Fall.

CHEM 3411 - Organic Chemistry I (4 Credits)
Lecture course for science majors. Topics covered include Structure and Bonding, Stereochemistry, Alkanes, reactions of alkenes, alkyl halides, alcohols and other functional groups, reaction mechanism and spectroscopy. Prereq: CHEM 2061 or 2091 with a C- or higher. No co-credit with CHEM 3481. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall, Spring, Summer.

CHEM 3418 - Organic Chemistry Lab I (1 Credit)
Laboratory course for science majors. Topics include methods of purification, separation and analysis of organic compounds; organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: CHEM 2068 or 2098 with a C-or higher. Coreq: CHEM 3411 or CHEM 3481. No co-credit with CHEM 3488. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 2068 or 2098 with a C- or higher Coreq: CHEM 3411 or CHEM 3481
Typically Offered: Fall, Spring, Summer.

CHEM 3421 - Organic Chemistry II (4 Credits)
Lecture course for science majors. A continuation of Chem 3411. Topics covered include spectroscopy, aromaticity, reactions of alkynes, conjugated dienes, benzene, benzene derivatives, aldehydes, ketone, carboxylic acids, carboxylic acid derivatives, enols, enolates and amines, reaction mechanisms and syntheses. Prereq: CHEM 3411 or 3481 with a C- or higher. No co-credit with CHEM 3491. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or 3481 with a C- or higher.

CHEM 3428 - Organic Chemistry Lab II (1 Credit)
Laboratory course for science majors. A continuation of CHEM 3418. Topics include analysis of organic unknowns, organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: CHEM 3418 or 3488 with a C- or higher. Coreq: CHEM 3421 or CHEM 3491. Note: Students will not receive credit for CHEM 3428 if they take it after successfully completing CHEM 3498. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 3418 or 3488 with a C- or higher Coreq: CHEM 3421 or 3491
Typically Offered: Fall, Spring, Summer.

CHEM 3481 - Majors Organic Chemistry I (4 Credits)
Lecture course designed for chemistry majors and students interested in other science majors, or the biomedical field, e.g., pre-dental, pre-pharmacy, or premedical; although all interested students are welcome to enroll. Organic chemistry for majors distinguishes from the regular Organic Chemistry course by a lower student-to-faculty ratio. This allows for the implementation of activities that provide a more in-depth view into this fascinating topic; as well as a better outlook into its relationship to everyday life and career opportunities. Activities may include writing and oral presentation exercises, or attending special seminars, among others. The topics covered are those in a general curriculum, such as structure and bonding, molecular representations, reactivity and mechanisms, acid/base reactions, and alkane/alkene/alkyne reactivity, to mention a few. No co-credit with CHEM 3411. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2061 or 2091 with a C- or higher or instructor permission. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2061 or 2091 with a C- or higher or instructor permission.
Typically Offered: Fall.

CHEM 3488 - Majors Organic Chemistry Laboratory I (1 Credit)
Laboratory course for science majors. Honors laboratory class to accompany CHEM 3411 or CHEM 3481. Topics include methods of purification, separation and analysis of organic compounds through extended experiments; organic reactions and workups and spectroscopy. Emphasis on scientific writing. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 2068 or 2069 or 2098 with a C- or higher and co-enroll in CHEM 3481 or instructor permission. Note: No co-credit with CHEM 3418. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS, ACS, BICM-BS, BICM-ADL) who have completed CHEM 2068 or 2069 or 2098 with a C- or higher and co-enroll in CHEM 3481 or instructor permission.
Typically Offered: Fall.

CHEM 3491 - Majors Organic Chemistry II (4 Credits)
Lecture course for science majors, a continuation of CHEM 3481. Majors Organic Chemistry is distinguished from the regular CHEM 3421 by smaller sections size and greater integration with the majors Chemistry and Biochemistry curriculum. Topics are covered with increased depth and organic chemistry topics are presented to highlight and reinforce overlapping idea from physical and biochemistry classes. Presentation is focused on reaction mechanisms, syntheses and introduction to the organic chemistry of metabolism. Intended for chemistry majors and advanced pre-medical, predental, pre-pharmacy and other health related careers requiring a full year of organic chemistry. Instructor permission required. No co-credit with CHEM 3421. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 with a C- or higher or instructor permission. Term offered: spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 with a C- or higher or instructor permission.
Typically Offered: Spring.

CHEM 3498 - Majors Organic Chemistry Laboratory II (2 Credits)
Laboratory course for science majors. A continuation of CHEM 3418 or CHEM 3488. Topics include multi-step organic reactions, workups and spectroscopy and an independent research project. Emphasis on use of the chemical literature, scientific writing and scientific presentation. Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS-ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 and CHEM 3488 or 3418 with a C- or higher or instructor permission. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: Chemistry and Biochemistry majors (CHEM-BS, CHEM-ADL, CHEM-BS2, CHEM-BS, ACS, BICM-BS, BICM-ADL) who have completed CHEM 3481 or 3411 and CHEM 3488 or 3418 with a C- or higher or instructor permission.
Typically Offered: Fall, Spring.

CHEM 3810 - Biochemistry (4 Credits)
Introduces the principles of biochemistry for science and health science-oriented majors. This survey course covers the important aspects of modern biochemistry including macromolecular structure, enzymology, and metabolism in one semester. Prereq: BIOL 2010(2061) or 2030(2097) and CHEM 3411 or 3481 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010(2061) or 2030(2097) and CHEM 3411 or 3481 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

CHEM 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

CHEM 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have a junior standing and at least a 2.75 GPA and must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

CHEM 4010 - Advanced Inorganic Chemistry (3 Credits)
Covers the fundamental principles of inorganic chemistry. Topics include atomic structure and periodicity, molecular symmetry, bonding, structural chemistry, main-group chemistry, coordination chemistry, and organometallic chemistry. Requisite knowledge in Undergraduate Inorganic and Physical Chemistry assumed. Cross-listed with CHEM 5010. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4110 - Advanced Analytical Chemistry (3 Credits)
Explores the fundamental principles of analytical chemistry. Topics will focus on meteorology (the science of making measurements), measurements based on energy transfer (e.g. spectroscopic analysis), and measurements based on mass transfer (e.g. chemical separations and electrochemistry). Requisite knowledge in Undergraduate Instrumental Analysis is assumed. Cross-listed with CHEM 5110. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4121 - Instrumental Analysis (3 Credits)
Surveys instrumental methods of analysis, emphasizing atomic and molecular spectroscopy, mass spectrometry, surface characterization, and chromatography techniques. Students are introduced to a wide array of powerful and elegant tools for obtaining qualitative and quantitative information about the composition and structure of matter. Prereq: CHEM 3111 or CHEM 3481, CHEM 3421 or CHEM 3491, PHYS 2331 or PHYS 2020 and CHEM 4521 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3111 or CHEM 3481, CHEM 3421 or CHEM 3491, PHYS 2331 or PHYS 2020 and CHEM 4521 with a C- or higher.
Typically Offered: Spring.

CHEM 4128 - Instrumental Analysis Laboratory (2 Credits)
CHEM 4128 demonstrates a wide array of powerful and elegant tools for obtaining qualitative and quantitative information about the composition and structure of matter. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Note: Required of chemistry majors and open to other students in CHEM 4121. Prereq: CHEM 3118 and 4538 with a C- or higher. Coreq: CHEM 4121. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq:CHEM 3118 and 4538 with a C- or higher Coreq: CHEM 4121
Typically Offered: Spring.

CHEM 4221 - Practical Applications of Spectroscopy (3 Credits)
This course surveys spectroscopic methods in order to deduce the structure of organic compounds from an examination of spectra, with an emphasis on infrared spectroscopy, mass spectometry, nuclear magnetic resonance spectroscopy, and ultraviolet spectroscopy. Students will be introduced to a wide array of powerful and elegant tools for obtaining qualitative information about the structure of matter. This course will require a good amount of thought, yet all of the concepts and associated mathematical manipulations are within the reach of a student who has met the prerequisites. Prereq: CHEM 3411 or CHEM 3481 with a C- or higher. Cross-listed with CHEM 5221. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or 3481 with a C- or higher.

CHEM 4310 - Advanced Organic Chemistry (3 Credits)
An exploration of structure, bonding and reactivity in organic modules that includes extensive analysis of the chemical literature, culminating in written and seminar presentations of individual projects. Requisite knowledge in Undergraduate Organic Chemistry and Physical Chemistry is assumed. Restriction: Restricted to degree-granting Graduate programs. Cross-listed with CHEM 5310. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 4388 - Nucleic Acid Technologies I (2 Credits)
This laboratory is intended to provide hands-on experience on the synthesis, characterization, and analyses of oligonucleotides of DNA and RNA. The laboratory will cover the basics to understand structural aspects of these biopolymers, using UV-vis, circular dichroism, electrophoresis, HPLC and mass spectroscopy. (All students will be expected to prepare, and turn in, three written reports; and three oral presentations. Every class member will also be required to keep an organized laboratory notebook, thus the class will be exposed to basic research aspects and literature searches. The course will also require students to design a successful experiment, that will prepare them for conditions they may likely encounter in an industrial, ,or advanced academic setting. Specifically, each student will choose a DNA sequence and probe their oligonucleotide model towards the recognition of a particular target, e.g., metabolite, protein, or molecular ion. In assessing these concepts, every student will be exposed to the basics of DNA/RNA structure as well as the chemistry of solid-phase chemistry. Every student will be required to present current topics (from recent literature) in front of the class as a way to enhance skills in oral presentation and scientific communication, aspects that will also enrich the scientific writing experience. To enhance the writing experience and provide a broader perspective on contemporary research, that is related to the course, students will be required to attend two seminars (from the departmental seminar series) and prepare a short written report. It is worth noting that this course will provide exposure to techniques that are commonly used in an industrial setting, e.g., in the development of RNA-based drugs and therapeutics, thus preparing them for a successful transition onto their next academic/professional step). Prereq: CHEM 3411 and CHEM 3421. Cross-listed with CHEM 5388. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 and CHEM 3421.

CHEM 4411 - Bioconjugate techniques and Theranostic Nanomedicine (3 Credits)
The selective making of chemical bonds to biological molecules in complex mixtures enables a wide variety of applications in bio- and nano-materials science, bioengineering, and diagnostic and therapeutic (nano-)medicine. This course will discuss theory and practical current methods for chemical modification and conjugation of proteins and other bio- and nano-materials: Topics include permanent and cleavable cross-linkers, protein modification reagents, immobilization of enzymes/DNA, enzyme-antibody conjugates, protein-protein interactions, PEGylation and labeling of proteins, and solid-phase peptide synthesis. Prereq: CHEM 3411 with a B- or higher. Cross-listed with CHEM 5411. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 with a B- or higher.
Typically Offered: Fall.

CHEM 4421 - Cannabis Chemistry (3 Credits)
An exploration of the terpene to cannabinoid compounds including biosynthesis pathways; human receptor structures and mechanism; current analytical methods for Quality Assurance and Quality Contorl and current research in medical applications. Prereq: Organic Chemistry I with a C- or higher (Chem 3411 or Chem 3481), and corequisite/prerequisite: Organic Chemistry II (CHEM 3421 or CHEM 3491). Cross-listed with CHEM 5421. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Organic Chemistry I with a C- or higher (Chem 3411 or Chem 3481), and corequisite/prerequisite:Organic Chemistry II (CHEM 3421 or CHEM 3491).
Typically Offered: Spring.

CHEM 4500 - Foundations of Physical Chemistry (3 Credits)
This course prepares students for CHEM 4511 and/or 4521. The goal is to bridge the gap between algebra- and calculus-based physics courses and to introduce essential math concepts and skills in Calculus III that are relevant to the Physical Chemistry course sequence 4511/4521. Prereq: PHYS 2020 or (prereq or coreq) PHYS 2331,CHEM 3421 or CHEM 3491 and MATH 2411 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: PHYS 2020 or (prereq or coreq) PHYS 2331,CHEM 3421 or CHEM 3491 and MATH 2411 with a C- or higher.
Typically Offered: Fall, Spring.

CHEM 4510 - Computational Chemistry (3 Credits)
Classical and ab initio molecular dynamics are covered from theory to application. Students have access to high-performance computational resources and cover current topics in the field. Requisite knowledge in Undergraduate Physical Chemistry is assumed. Cross-listed with CHEM 5510. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHEM 4511 - Physical Chemistry: Thermodynamics and Kinetics (3 Credits)
Includes study of the laws of thermodynamics, thermochemistry, chemical equilibria, solutions and statistical mechanics. Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 Calculus III -OR- CHEM 4500 Foundations for Physical Chemistry with a C- or higher) OR co-requisite/ pre-requisite MATH 3511 Mathematics of Chemistry with a C- or higher if completed before CHEM 4511. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 -OR- CHEM 4500 with a C- or higher) OR co-requisite/pre-requisite MATH 3511 with a C- or higher.
Typically Offered: Fall.

CHEM 4518 - Physical Chemistry Laboratory: Reaction Analysis (2 Credits)
Instruction in the experimental techniques of physical chemistry with emphasis on the properties of gases, thermodynamics and chemical equilibrium. Prereq or Coreq: CHEM 4511 with a C- or higher if completed before CHEM 4518. Term offered: spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Pre- or Co-Requisite CHEM 4511 with a C- or higher if completed before CHEM 4518.
Typically Offered: Spring.

CHEM 4521 - Physical Chemistry: Quantum and Spectroscopy (3 Credits)
Continuation of CHEM 4511, with emphasis on chemical kinetics, quantum mechanics, molecular structure and spectroscopy. Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 Calculus III -OR- CHEM 4500 Foundations for Physical Chemistry with a C- or higher) OR co-requisite/ pre-requisite MATH 3511 Mathematics of Chemistry with a C- or higher if completed before CHEM 4521. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020 or PHYS 2331 with C- or higher and either (pre-requisite MATH 2421 -OR- CHEM 4500 with a C- or higher) OR co-requisite/pre-requisite MATH 3511 with a C- or higher.
Typically Offered: Spring.

CHEM 4530 - Advanced Physical Chemistry (3 Credits)
Explores fundamental properties of molecules (bond length and strength, the potential energy surface, reaction rates, etc.) and examines how these properties are measured, using original literature as the primary source, and culminating in written and seminar presentations of individual projects. Requisite knowledge in Undergraduate Physical Chemistry is assumed. Cross-listed with CHEM 5530. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CHEM 4538 - Physical Chemistry Laboratory: Molecular Structure (2 Credits)
CHEM 4538 explores the central principles of physical chemistry, with emphasis on quantum chemistry, spectroscopy, and computational methods. The post laboratory assignments demonstrate a writing process that follows the guidelines of the American Chemical Society. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher if completed before CHEM 4538 . Term offered: fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Pre or Co-Requisite CHEM 4511 or CHEM 4521 with a C- or higher.
Typically Offered: Fall.

CHEM 4548 - Physical Biochemistry Laboratory (2 Credits)
Experimental techniques of physical chemistry emphasizing thermodynamics, kinetics, and spectroscopy of biological molecules. Fulfills the Physical Chemistry Lab requirement for Biochemistry Emphasis majors. Prereq: CHEM 3498 or CHEM 4828 and PHYS 2020 or PHYS 2331 with a C- or higher. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher. Recommended Preparation: CHEM 4810. Cross-listed with CHEM 5548. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3498 or CHEM 4828 and PHYS 2020 or PHYS 2331 with a C- or higher. Prereq or Coreq: CHEM 4511 or CHEM 4521 with a C- or higher.
Typically Offered: Fall, Spring.

CHEM 4580 - Molecular Informatics (2 Credits)
This course resides at the intersection between Chemistry, Biochemistry, and Data Science. The course covers fundamental concepts of Chemical and Biochemical Informatics and provides students with hands on experience in using computational tools to manipulate chemical and biochemical data. Students will learn fundamentals of data science, database management, data structure, data representation, data visualization, and data analysis as applied to Chemistry and Biochemistry. The course requires a basic understanding of programming but does not require extensive programming experience. Examples explored in class and in homework will be built using Python code within Jupyter Notebooks or Google Colab notebooks such that students can explore new topics while remaining focused on the underlying molecular concepts and computer methods which allow them to manage large amounts of molecular information and to find relationships between the structure and properties of molecules. Data mining approaches will be explored as will classification algorithms and chemical similarity analysis methods. Students will learn about the applications of cheminformatics in drug discovery, such as compound selection, virtual library generation, virtual high throughput screening which can check for potential molecules that have the potential to be developed into drugs. Note: While this course is not a pre-requisite for 4510 Computational Chemistry, CHEM 4640 AI in Chemistry and Biochemistry, or CHEM 4845 Molecular Modeling and Drug Design, the skills developed in this course will work synergistically with those courses and will allow you to get more from your experiences in those courses or from your experience in a research lab. Prereq: CHEM 2031, CHEM 2061, CHEM 3411, and CHEM 4630 or MATH 1376 or BIOS 6642 or MOLB 7900 or CSCI 1410 with a C- or higher. Cross-listed with CHEM 5580. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2061, CHEM 3411, and CHEM 4630 or MATH 1376 or BIOS 6642 or MOLB 7900 or CSCI 1410 with a C- or higher.

CHEM 4600 - Advanced Topics in Chemistry (1-3 Credits)
Upper-level majors in chemistry or a related discipline explore a special topic in chemistry or biochemistry. A description of topics to be covered in the current semester is maintained on the Chemistry department website. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CHEM 4610 - Understanding & Presenting Chemical Research (1-2 Credits)
This course will improve your ability to systematically search for chemical information, help you interpret the information you find, & improve your ability to summarize and present that information. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Cross-listed with CHEM 5610. Term offered: fall, spring. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher
Typically Offered: Fall, Spring.

CHEM 4630 - Programming for Data Analysis in the Physical Sciences (1 Credit)
This course will be taught using live coding format (the instructor will code live in the classroom with the students). In this course, you will learn to process data using python scripts that you will write. Data include for example absorption spectra, protein pdb files, coordinate files. You will also learn how to use Python libraries and write functions (for example to create high resolution graphs). Finally, you will learn best coding practices, how to keep track of different versions of your code and share your code using Github. Prereq: CHEM 2061 or CHEM 2091 with a C- or higher. Having completed a semester of Organic Chemestry is recommended preparation for optimal student success. Cross-listed with CHEM 5630. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: CHEM 2061 or CHEM 2091 with a C- or higher

CHEM 4640 - Artificial Intelligence in Chemistry and Biochemistry (3 Credits)
Artificial Intelligence (AI) changes every aspect of our lives. In this course, we explore AI and its applications from the perspective of a chemist/biochemist. The role of AI and the latest trends in modern chemistry and biochemistry will be taught. Students will learn how to connect modern AI techniques to their own research projects, using both experimental and computational data. Prereq: CHEM 2031, CHEM 2061 and CHEM 3411 with a C- or higher. Pre/Coreq: CHEM 3810/4810/5810 and CHEM 4630/5630. Cross-listed with CHEM 5640. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 2031, CHEM 2061 and CHEM 3411 with a C- or higher. Pre/Coreq: CHEM 3810/4810/5810 and CHEM 4630/5630.

CHEM 4655 - Teaching Assistant Bootcamp (1 Credit)
This course is 4-5 8-hour days of intensive training in suitable pedagogy for general chemistry and organic chemistry laboratory classes, procedures for teaching laboratory sections, and laboratory techniques. Students must have a teaching assistant contract with the Chemistry Department in order to take this course. Cross-listed with CHEM 5655. Term offered: fall. Repeatable. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Typically Offered: Fall.

CHEM 4700 - Environmental Chemistry (3 Credits)
A discussion of the sources, reactions, transport, effects, and fates of chemical species in the water, soil, and air environments. Prereq: CHEM 3111 or CHEM 3411 or CHEM 3481 with a C- or higher. Cross-listed with CHEM 5700. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3111 or CHEM 3411 or CHEM 3481 with a C- or higher
Typically Offered: Spring.

CHEM 4810 - General Biochemistry I (3 Credits)
In-depth introductory course for chemistry, science and health science majors. Topics include structure and energetics of proteins; mechanisms and kinetics of enzymes; structure and function of carbohydrates, lipids and nucleic acids. Prereq or Coreq: CHEM 3421 or CHEM 3491 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CHEM 3421 or CHEM 3491 with a grade of C- or higher.

CHEM 4815 - Structural Biology of Neurodegenerative Diseases (3 Credits)
Advanced course in Biochemistry/Biophysics. Principles of Protein Folding, Structure-Function Relationship, and spectroscopic techniques related to characterization of these processes as applied to neurodegenerative diseases such as Parkinson's and Alzheimer's. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5815, BIOL 4815, and BIOL 5815. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Spring.

CHEM 4820 - General Biochemistry II (3 Credits)
Advanced course for chemistry, science and health science majors. Topics include energetics and pathways for metabolism of carbohydrates, lipids, and amino acids. Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4825 - Biochemistry of Metabolic Disease (3 Credits)
Advanced course in biochemistry. An expanded study of selected topics in metabolism and how they relate to diseases, including inflammation, diabetes, obesity, and rare genetic disorders. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5825, BIOL 4825 and BIOL 5825. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Fall.

CHEM 4828 - Biochemistry Lab (2 Credits)
Focuses on modern laboratory techniques for biochemical research, with an emphasis on methods for protein isolation, purification and characterization. Students perform experiments including chromatography, electrophoresis, molecular cloning, spectrophotometry, and enzyme activity assays. Prereq: CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4835 - Biochemistry of Gene Regulation and Cancer (3 Credits)
Explores the biochemical and molecular aspects of cancer biology. Topics include DNA mutations and repair, gene regulation, oncogenes and tumor suppressors, stem cells and differentiation, and cancer drug development. Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331. Cross-listed with CHEM 5835, BIOL 4835, and BIOL 5835. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: 1) BIOL 2010 (or 2061/2097/2030), BIOL 2011 (or 2081/2098/2031), BIOL 2020 (or 2051/2095/2040), and BIOL 2021 (or 2071/2096/2041), and 2) CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Coreq: PHYS 2020 or PHYS 2331
Typically Offered: Fall.

CHEM 4840 - Independent Study: Chem (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

CHEM 4845 - Molecular Modeling and Drug Design (3 Credits)
Advanced course in biochemistry. An introductory course on modern molecular modeling techniques and their applications to computer-aided rational drug design. Prereq: CHEM 3411 or CHEM 3481 with a C- or higher and either PHYS 2020 or PHYS 2331 with a C- or higher. Cross-listed with CHEM 5845. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3411 or CHEM 3481 with a C- or higher and either PHYS 2020 or PHYS 2331 with a C- or higher.
Typically Offered: Fall.

CHEM 4860 - Bioinorganic Chemistry: Bioinorganic compounds in medicine (3 Credits)
Explore the roles of metals in biochemistry and medicine by studying chemical/physical properties of metal coordinated compounds. The course focus on metal coordination resulting biopolymer folding and the function of macromolecules that is involved into iron cytochromes, zinc and copper enzymes, iron sulfur proteins, oxygen transport, iron storage, electron transfer, inorganic model compounds, metals in medicine, and toxicity of inorganic species. Topic is extended to biomedical application such as chemotherapy. Prereq: CHEM 3810 or CHEM 4810 or CHEM 5810 with a C- or higher. Cross-listed with CHEM 5860. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 3810 or 4810 or 5810 with a C- or higher

CHEM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Chinese (CHIN)

CHIN 1000 - China and the Chinese (3 Credits)
A multidisciplinary introduction to Chinese society both past and present. Prehistory, birth of imperial China, literature, philosophy, religion, nationalism, revolution, modernization, contemporary life, social structure, gender, food, family life, population policy, ethnicity, popular culture, economics and politics. Note: This course is taught in English. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

CHIN 1010 - Beginning Chinese I (5 Credits)
A basic introduction to Chinese language and culture. Students study pronunciation, vocabulary, grammar and simple writing techniques. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. No previous study of Chinese is required. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 1020 - Beginning Chinese II (5 Credits)
(Continuation of CHIN 1010.) Further practice of pronunciation, study of vocabulary, grammar, and simple writing techniques. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 1010 or equivalent, or have taken one year of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 1071 - Mandarin Chinese for the Professions (3 Credits)
Provides students with language skills and cultural knowledge in the context of conducting business with Chinese. Students develop elementary language skills for communication, cultural awareness and business etiquette via structured thematic units with business scenarios and simulations. Note: Chinese 1071 cannot be taken to fulfill language requirements; nor can it be used to substitute for Chinese 1010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

CHIN 2110 - Second Year Chinese I (3 Credits)
Continuing development of listening, speaking, reading, and writing skills in practical Chinese, with grammar review and introduction of the Chinese dictionary. In addition to contemporary Chinese, there is some emphasis on Chinese classical materials, such as proverbs. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 1020 or equivalent, or have taken two years of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 2120 - Second Year Chinese II (3 Credits)
(Continuation of CHIN 2110.) Satisfies the fourth semester language requirement at most graduate schools. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed CHIN 2110 or equivalent, or have taken three years of high school Chinese, or possess equivalent proficiency. A grade of C- or higher in CHIN 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 2840 - Independent Study (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring.

CHIN 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

CHIN 2970 - Contemporary Chinese Cinema (3 Credits)
Introduces students to Chinese cinema, one of the most powerful and often controversial modes of representing society, culture, history and politics in China. Note: Taught in English. All films have English subtitles. No previous study of Chinese language or culture is required. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 3010 - Advanced Intermediate Chinese (3 Credits)
This course capitalizes on students' already acquired knowledge to further develop language skills in Mandarin Chinese. Students learn to make a transition from reading pedagogically prepared materials to more authentic ones. Note: this course assumes that students have passed CHIN 2120 or equivalent, or possess equivalent proficiency. A grade of C- or higher in CHIN 2120 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 3071 - Chinese for Business (3 Credits)
Chinese for International Business is a Language for Specific Purposes (LSP) course designed for students who have completed CHIN 1071 or the equivalents. The primary goal is to provide students with an opportunity to be more familiar with Chinese business operations in Chinese-speaking communities such as Mainland China, Hong Kong, Singapore, and Taiwan. The course also emphasizes the business usage and jargon in modern Chinese as well as the business-related sociocultural awareness. Through reading, discussing, and analyzing the actual cases from real foreign enterprises, students will gain in-depth knowledge about the macro and microeconomic situations in the Chinese-speaking world. In addition, within the business contexts provided by the materials, the classes will be organized and guided into a variety of language activities. Finally, the class materials are primarily presented in Pinyin and no background in Chinese characters is required. Note: The class materials are primarily presented in Pinyin and no prior background in Chinese characters is required. Prereq: CHIN1071 with a C- or higher, or the equivalents. Term Typically Offered: Fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHIN 1071 with a C- or higher, or the equivalents.
Typically Offered: Fall.

CHIN 3130 - Special Topics in Chinese (3 Credits)
Varying topics in Chinese language, literature and culture appropriate to the 3000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed CHIN 2120 or equivalent, or possess equivalent language proficiency. Note: May be taken more than once, provided that the topic is different each time. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

CHIN 3200 - Contemporary Chinese Society and Culture (3 Credits)
Provides students with an overview of the systems in modern China (such as educational, political and economical), its family and interpersonal constructs and the elements of modern China found in popular cultures. It also exposes students to rudimentary and practical use of the Chinese language. Note: This course is taught in English. Max hours: 3 Credits.
Grading Basis: Letter Grade

CHIN 3300 - Special Topics on Chinese Film (3 Credits)
Studies the cultural, social and historical conditions that have shaped Chinese cinema. May focus on one Chinese speaking country or more than one (including but not limited to China, Taiwan and Hong Kong). May focus on a particular period (pre-Cultural revolution, for example) or a particular theme (urban cinema or martial arts films, for example). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 3840 - Independent Study: CHIN (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

CHIN 3939 - Internship - CHIN (1-3 Credits)
Department consent required. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CHIN 3995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

CHIN 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, ETST 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

CHIN 4421 - Modern China (3 Credits)
Surveys Chinese history in the modern era. Includes examination of Western domination of China; revolution and internal fragmentation of China; Japanese attacks and World War II; and civil war and the communist revolution. Cross-listed with HIST 4421, and HIST 5421. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 4423 - China in the World (3 Credits)
China does not exist apart from the world, and never has. This course approaches Chinese history by asking: how has the world shaped China's history, and how has China shaped the history of the world? Rather than explain what went on in China, we focus on exploring what went on outside-among China's immediate neighbors in East Asia, the entire Eurasian region, the African continent, and the so-called "West." The course moves chronologically from ancient times to the present, and is organized around the themes as conquest, trade, international relations, climate change, environmental stress, and the circulation of ideas. Cross-listed with HIST 4423 and HIST 5423. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

CHIN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 4690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 5690. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CHIN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 4691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

CHIN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Civil Engineering (CVEN)

CVEN 1025 - Civil Engineering Graphics and Computer Aided Design (3 Credits)
Introduces microcomputer-based, menu-driven, 2-D and 3-D computer-aided design systems; standard Civil Engineering industry details and some three-dimensional modeling of solid objects; principles on engineering drawing and descriptive geometry with applications specifically geared for civil engineers. Prereq: High School Geometry and Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CVEN 1067 - Introduction to Civil Engineering (1 Credit)
Introduces civil engineering and the many career choices in this broad field. Covers the history of the profession, current civil engineering projects, societal and global implications, technologies used, professional ethics, sustainability, and licensure. Max hours: 1 Credit.
Grading Basis: Letter Grade

CVEN 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, ENGR 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

CVEN 2121 - Analytical Mechanics I (3 Credits)
A vector treatment of force systems and their resultants; equilibrium of trusses, beams, frames, and machines, including internal forces and three-dimensional configurations, static friction, properties of areas, distributed loads and hydrostatics. Prereq: PHYS 2311 with a C- or higher and Prereq/Coreq: MATH 2411. Cross-listed with MECH 2023. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 with a C- or higher. Prereq/Coreq: MATH 2411.

CVEN 2212 - Surveying for Construction and Engineering (2 Credits)
Survey observations used by engineers and surveyors using levels and total stations to make sure things are put in the right place and leveled; analysis and adjustment of measured loops, traverses; areas and volumes; methods used in construction; analysis of error sources; and presentation of results. Course includes a required lab section. Max hours: 2 Credits.
Grading Basis: Letter Grade

CVEN 2214 - Surveying for Engineering (1 Credit)
Survey observations used by engineers and surveyors using levels and total stations to make sure things are put in the right place and leveled; analysis and adjustment of measured loops, traverses; areas and volumes; methods used in construction; analysis of error sources; and presentation of results. This course does not include a lab. Max hours: 1 Credit.
Grading Basis: Letter Grade

CVEN 2215 - Surveying Lab (1 Credit)
For those students in CVEN 2214 who wish to experience hands-on use of the principal survey equipment they see in the lectures. Provides access to levels and theodolites to perform measurements, record, check, and adjust them. Prereq or Coreq: CVEN 2214. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 2214.
Typically Offered: Fall, Spring.

CVEN 3111 - Analytical Mechanics II (3 Credits)
A vector treatment of dynamics of particles and rigid bodies, including rectilinear translation, central-force, general motion of particles, kinematics of rigid bodies, the inertia tensor, plane motion of rigid bodies; energy and momentum methods for particles, systems of particles and rigid bodies. Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better. Cross-listed with MECH 2033. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better.

CVEN 3121 - Mechanics of Materials (3 Credits)
Mechanical properties of materials, stresses and strains in members subjected to tension, compression and shear, combined stresses, flexural and shearing stresses in beams, deflections of beams, column analysis, principal stresses. Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better. Cross-listed with MECH 3043. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 2121 or MECH 2023 and MATH 2411 with a C- or better.

CVEN 3141 - Introduction to Structural Materials (2 Credits)
To learn the fundamental characteristics of structural materials, including steel, concrete, masonry, timber, and composites; to learn how to test structural materials in the laboratory; and to learn how to interpret test data for engineering applications. After completing this course, students are expected to understand the behavior of structural materials and establish necessary background for structural design courses. Prereq or Coreq: CVEN 3121 or MECH 3043. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 3121 or MECH 3043.

CVEN 3200 - Computational Methods for Civil Engineers (3 Credits)
This course introduces advanced programming and data analysis skills pertinent to the range of civil engineering disciplines. Topics will include numerical methods, statistical analysis, and programming techniques for measurements and data collection. Languages and tools may include Excel, Matlab, Python, and Arduino. Prereq: (IWKS 2300 or ENGR 1100) and (MATH 3800 or CVEN 3611) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: (IWKS 2300 or ENGR 1100) and (MATH 3800 or CVEN 3611) with a C- or higher.

CVEN 3313 - Fluid Mechanics (3 Credits)
Fundamentals of fluid mechanics. Topics include fluid properties, hydrostatics, the continuity principle, the energy principle, the momentum principle, similitude and dimensional analysis, drag, and friction for laminar and turbulent flow in closed conduits. Prereq: CVEN 2121 or MECH 2023 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

CVEN 3323 - Hydrosystems Engineering (3 Credits)
Civil engineering hydraulics applied to the hydrologic cycle; surface- and groundwater resources; precipitation, streamflow, and groundwater measurements; and basics of reservoir operation, open channel hydraulics, and storm water design. Prereq: CVEN 3313 and ENGR 1100 or IWKS 2300 with a C- or higher. Restriction: Restricted to Civil Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3313 and ENGR 1100 or IWKS 2300 with a C- or higher. Restriction: Restricted to Civil Engineering majors.

CVEN 3401 - Introduction to Environmental Engineering (3 Credits)
Introduces students to the broad field of environmental engineering. Topics include essential chemical, biological, and risk assessment concepts needed for addressing environmental problems. Major unit operations and processes used for treating wastewater and potable drinking water. An overview of technologies used for treating particulate and gaseous air pollutants, managing solid wastes, and remediating hazardous wastes. The course also introduces environmental sustainability, green engineering, life cycle assessment and other systems oriented concepts. Prereq: CHEM 1130 or CHEM 2031 or ENGR 1130 with a C- or better. Cross-listed with CVEN 5401. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CHEM 1130 or CHEM 2031 or ENGR 1130 with a C- or better.

CVEN 3505 - Structural Analysis (3 Credits)
The focus of this course is on the understanding of structural analysis principles and application of techniques. We will build upon topics initiated in prerequisite courses. Topics include: Introduction to loads, structural idealization, analysis of trusses, arches, beams and frames, cables, influence lines, beam deflections, and introductions to matrix analysis and computer-assisted analysis. The course will be fast-paced and mathematically rigorous. Prereq: CVEN 3121 or MECH 3043 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3121 or MECH 3043 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 3602 - Transportation Engineering (3 Credits)
This course will introduce you to the concepts and methods of transportation engineering, planning and management. This course will emphasize traffic engineering. Topics will include vehicle dynamics, traffic flow fundamentals, accident analysis, signal timing, highway capacity analysis, level of service analysis, freeway operations, and evaluation procedures for alternative transportation projects. Prereq: C- or better in MATH 1401 or Junior Standing or instructor permission. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 1401 or Junior Standing or instructor permission

CVEN 3611 - Engineering Statistics (3 Credits)
Covers statistical methods for engineering studies. Topics include common probability distributions, sample design, descriptive statistics, hypothesis testing of one or two populations, tests of discrete versus continuous random variables, analysis of variance, linear and non-linear multiple regression models, non-parametric tests of fit. Prereq: MATH 2411 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411 with a C- or better.

CVEN 3718 - Geotechnical Engineering I (3 Credits)
Soil formation, phase diagram, soil constituents and behavior, description of soils, classification, clay minerals, compaction, soil improvement, capillarity, shrinkage, swell, collapsible soil, frost action, flow through porous media, and consolidation. Lab experiments, including specific gravity, grain size analysis, liquid and plastic limits, and consolidation, are to be conducted in concert with the lectures. Prereq: CVEN 3121 or MECH 3043 with a C- or higher. Pre or Coreq: CVEN 3313. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3121 or MECH 3043 with a C- or higher Pre or Coreq: CVEN 3313 Restriction: Restricted to Civil or Construction Engineering majors
Typically Offered: Fall, Spring.

CVEN 4000 - Senior Seminar (0 Credits)
Required for all Civil Engineering majors. This course is generally taken the semester of graduation. To complete this course one must complete the fundamentals of engineering exam from the national council of examiners for engineering and surveying, attend any required course meetings, and complete an ethics assignment. Failure to attend the required meeting(s) of this course will delay graduation. Prereq or Coreq: CVEN 4067. Max hours: 0 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: CVEN 4067
Typically Offered: Fall, Spring.

CVEN 4025 - Autocad Civil 3d & Advanced Civil Engineering Graphics (3 Credits)
Lectures target civil engineering industry specific site information modeling software and geospatial industry specific geographical information systems software to elevate students' knowledge of each software to an in-depth understanding. Laboratory exercises will focus on civil drafting and design, producing documentation, and general project workflows. Additional laboratory exercises will focus on geospatial data creation, data management, and cartographic display. Prereq: CVEN 1025. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 1025

CVEN 4067 - Senior Design Projects (3 Credits)
Senior civil engineering students, working in teams, are assigned significant open-ended design problems requiring the synthesis of material learned in previous engineering courses for solution. Design teams work independently under the supervision of a civil engineering faculty member. Prereq: Graduation Agreement and one design course. Co-req: A second design course. Restriction: Restricted to Civil Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 4427 or 4565 or 4575 or 4585 or 4602 or 4738 with a C- or higher Coreq: CVEN 4427 or 4565 or 4575 or 4585 or 4602 or 4738 Restrictions: Restricted to Civil Engineering majors.

CVEN 4077 - Engineering Economy (3 Credits)
Applies economic and financial principles to evaluation of engineering alternatives. Calculation of annual costs, present worth and prospective rates of return on investment. Review of systems analysis techniques, including simulation, linear programming, and project scheduling. Prereq: Junior standing. Cross-listed with MECH 4147. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to junior standing majors in the College of Engineering, Design and Computing

CVEN 4087 - Engineering Contracts (3 Credits)
Laws met by the practicing engineer, types of contracts, specification writing, laws on contracts, agency, partnership, sales and property, with primary emphasis on rights and duties of the engineer. Prereq: Senior standing. Cross-listed with CVEN 5087. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to senior standing majors in the College of Engineering, Design and Computing

CVEN 4426 - Pipe Network and Sewer Design (3 Credits)
Design of pressurized pipe networks for water supply and sanitary sewers for wastewater collection. Topics include the civil engineering design process, estimation of water and wastewater design loads, and design of pressurized pipe networks and sanitary sewers including pump selection, service reservoirs, lift stations, and relevant software. Design project and field trip required. Prereq: CVEN 3313 and Prereq or Coreq: ENGR 1100 or IWKS 2300 with a C- or better. Cross-listed with CVEN 5426. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3313. Prereq or Coreq: ENGR 1100 or IWKS 2300 with a C- or better.

CVEN 4427 - Storm Water System Design (3 Credits)
This course covers urban watershed analysis, design rainfall and hydrologic losses, flood frequency and design event, rational method for peak runoff prediction, street hydraulic capacity and safety, culvert hydraulics, street inlet collection system, and storm sewer system design and flow analysis. Prereq: CVEN 3323 and senior standing. Restriction: Restricted to Civil Engineering majors. Cross-listed with CVEN 5427. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3323 with a C- or higher Restriction: Restricted to Civil Engineering majors

CVEN 4520 - Structural Engineering and the Ocean Environment (3 Credits)
This course explores the design of structures for coastal and ocean resilience within the broader context of climate change adaptation. The following subjects will be introduced: coastal and oceanic wave dynamics; hydrodynamic forces on coastal structures and methods for attenuation; analysis and design of floating structures. Prereq: MATH 2421 with a C- or better and CVEN 3121 or MECH 3043 with a C- or better. Cross-listed with CVEN 5520. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 with a C- or better and CVEN 3121 or MECH 3043 with a C- or better.

CVEN 4565 - Timber Structure Design (3 Credits)
Design of wood roof, wall, and floor systems including beams, columns, trusses, diaphragms and shear walls for vertical and lateral loads. Connection design, glued-laminated members, plywood, and engineered lumber are incorporated. Prereq: CVEN 3505 and CVEN 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5565. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4575 - Structural Steel Design (3 Credits)
Design of structural steel members and their connections. Prereq: CVEN 3505 and 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4585 - Reinforced Concrete Design (3 Credits)
The course objective is to introduce the students to the principles of structural design in reinforced concrete. The course emphasizes determining loads for structural design and using these loads to design reinforced concrete members. Prereq: CVEN 3505 and 3141 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 and 3141 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors

CVEN 4590 - Design of Prestressed Concrete (3 Credits)
To learn the basic concepts of analysis and design of prestressed concrete, which is reinforced concrete in which steel is tensioned against the concrete, thereby introducing compression in concrete and hence overcoming the tensile weakness of concrete relative to its compressive strength. Cross-listed with CVEN 5590. Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4591 - Design of Composite Structures (3 Credits)
The objective of this course is to provide engineering students with an overall awareness of the application and design of composite structures. Practical examples are discussed based on theory. Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5591. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: CVEN 4585 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4592 - Computer-Aided Structural Analysis and Design (3 Credits)
The objective of this course is to introduce students to the fundamentals of computer-aided structural analysis and design. The course emphasizes different theoretical formulations of computational mechanics and the practical use of computer programs used worldwide in the structural engineering profession. Emphasis is also placed on techniques to check the reliability and quality of solutions. Prereq: CVEN 3505 with a C- or better or graduate standing. Cross-listed with CVEN 5592. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3505 with a C- or higher or graduate standing (GRAD or NDGR).

CVEN 4602 - Advanced Highway Design (3 Credits)
This course delves into the art and science of designing sustainable and context sensitive street and highway facilities. Topics include road classification, transportation planning, road alignments, cross-section design, bicycle and pedestrian facilities, intersections, and street network design. Such details are a focus of the course; however, the overarching theme reflects upon the social, economic, and environmental implications of highways and as well as proper integration into the overall transportation system. Prereq: CVEN 3602 and CVEN 3718 with a C- or better; Restriction: Restricted to Civil or Construction Engineering majors. Cross-listed with CVEN 5602. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 and CVEN 3718 with a C- or better. Restriction: Restricted to Civil or Construction Engineering majors.
Typically Offered: Fall.

CVEN 4612 - Traffic Impact Assessment (3 Credits)
Covers (1) procedures to satisfy state and local requirements for transportation impact studies, (2) methods to perform trip generation, distribution, and traffic assignment for impact analyses, and (3) analysis of transportation impacts on residential communities, mode choice, regional business (downtown or suburban), peak and off-peak travel times, noise, safety, parking and pedestrians. A course project requires students to develop an application of analysis software to a case study area. Prereq: CVEN 3602 with a C- or better. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or better.

CVEN 4621 - Highway Capacity Analysis (3 Credits)
Covers the principles and applications of highway capacity analysis for freeways and arterials, ramps and interchanges, weave and merge sections, signalized and unsignalized intersections, roundabouts, pedestrian areas and transit. Emphasis is on level-of-service analysis procedures in the Highway Capacity Manual, although other approaches are also discussed. Additional topics include roadway characteristics, vehicle dynamics, human factors, speed and volume studies, travel time surveys and traffic flow characteristics. Prereq: CVEN 3602 with a C- or better. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or better.

CVEN 4631 - Transport Modeling and Big Data (3 Credits)
This course is an introduction to the models, frameworks and techniques used in estimating demand for passenger travel across modes and regions. The goal is to provide you an overview of the different steps involved in traditional travel demand forecasting methods and then delve into newer "big" data sources and methods that will allow us to observe and analyze travel in completely new ways. We will also briefly cover sampling techniques and survey design as part of data collection for estimation of travel demand. Prereq: Any statistics course with a C- or better(MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010). Cross-listed with CVEN 5631. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2830, MATH 3800, CVEN 3611, ELEC 3817, or BANA 2010 with a C- or higher.
Typically Offered: Spring.

CVEN 4650 - Urban Street Design (3 Credits)
This course delves into the art and science of designing sustainable and context sensitive street and highway facilities. This course is intended to intersect with CVEN 4602/5602 – Advanced Highway Design, which covers rural highway design. Topics for this course will focus on urban street design principles, including transportation planning, bicycle and pedestrian facilities, intersections, and street network design, as well as techniques and software for coordinated signal timing. Such details are a focus of the course; however, the overarching theme reflects upon the social, economic, and environmental implications of highways and as well as proper integration into the overall transportation system. Prereq: CVEN 3602 with a C- or higher, recommend B- or higher. Prereq or coreq: CVEN 4602 or CVEN 5602. Cross-listed with CVEN 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3602 with a C- or higher. Coreq or prereq: CVEN 4602 or CVEN 5602.
Typically Offered: Summer.

CVEN 4738 - Intermediate Foundation Engineering (3 Credits)
Applies principles of soil mechanics to the analysis and design of foundations and earth structure. Theories of consolidation, earth pressure, slope stability, and bearing capacity. Studies settlement of structures, shallow and deep foundations, retaining walls and excavations. Cross-listed with CVEN 5738. Prereq: CVEN 3141 and 3718 with a C- or higher. Restriction: Restricted to Civil or Construction Engineering majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CVEN 3141 and 3718 with a C- or higher Restriction: Restricted to Civil or Construction Engineering majors.

CVEN 4800 - Special Topics (3 Credits)
Supervised study of special topics of interest to students under guidance of instructor. Prereq: Permission of instructor. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

CVEN 4840 - Independent Study (1-6 Credits)
This category is intended for topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Departmental approval is required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

CVEN 4939 - Internship (1-3 Credits)
Civil Engineering undergraduate internship. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CLAS Interdepartmental Courses (CLAS)

CLAS 2000 - Special Topics in Liberal Arts and Sciences (1-3 Credits)
Introductory level course offering a flexible format for dealing with a specific topic of special interest in liberal arts and sciences disciplines. Note: Specific topic published in the schedule of courses. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CLAS 2100 - Exploration of Healthcare (1-2 Credits)
The purpose of this course is to enable undergraduate pre-health students who are seeking healthcare careers to gain valuable instruction and shadowing experience within a healthcare environment, apply science concepts to healthcare applications, and develop relationships with current healthcare providers. Students will be exposed to an urban safety-net hospital (Denver Health Hospital) that primarily serves underrepresented and under-served populations. In the clinical setting, students will observe medical practice and attend lectures connecting science coursework with real-world healthcare topics. By the completion of the program, participants will gain a better understanding of what healthcare providers experience at Denver Health, what it takes to become a healthcare provider, healthcare disparities and ethical responsibilities as a healthcare provider, and how general science concepts are used in the healthcare setting. Note: Students must be enrolled in or have completed BIOL 2010 or BIOL 2030 and CHEM 2031 or CHEM 2096 and complete an application process to Denver Health, to be eligible for this program. Contact the Health Professions Program Office for application information (ucdhealthcareers@ucdenver.edu). Restriction: Registration is by instructor approval only. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

CLAS 2939 - Entering Research Internship (1-3 Credits)
Department consent required.. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CLAS 3939 - Internship (1-6 Credits)
Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA

CLAS 4000 - Special Topics in Liberal Arts & Sciences (1-3 Credits)
Upper division level course offering a flexible format for dealing with a specific topic of special interest in liberal arts and sciences disciplines. Note: Specific topic published in the schedule of courses. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CLAS 4840 - Independent Study: CLAS (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Commodities (CMDT)

CMDT 1000 - Introduction to Commodities (1 Credit)
Introduction to Commodities will expose students to the business side of commodity markets – energy, minerals and agriculture. Students will learn about potential career options in commodities including risk management, supply chain, trading, and investment analysis. Students will have the opportunity to access various state of the art learning technologies that the J.P. Morgan Center for Commodities offer, such as: Bloomberg, Morningstar, and CQG through live demonstrations. This class will have the opportunity to meet and interact with guest speakers and industry executives as well as attend field trips to various commodity sites. Examples may include visiting Newmont Mining's gold mine in Cripple Creek and visiting Excel Energy and/or Ardent Mills' trading floors in downtown Denver to further learn the business skills required for these types of positions. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

CMDT 2100 - The Future of Energy (3 Credits)
This class provides students with an introduction to energy and how it supports our everyday lives, from how these sources powers our homes, drives the food we eat, the clothes we wear and enables our mobility. Students will gain understandings of the various forms of energy, including both non- and renewable sources, including how these are produced, transported, traded, and consumed here in Colorado, in the U.S. and around the world. Students will explore key topics including energy emissions, climate change as well as topical geopolitical events related to energy. Importantly, students will research and provide opinions on realistic scenarios and opportunities that we may expect for our energy future. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CMDT 4490 - Commodity Trading (3 Credits)
This is a co-listed class with the J.P. Morgan Center for Commodities and the Finance Department. This course focuses on how securities and futures contracts are designed and traded including trading exchange operations, regulation, trading mechanisms and processes. Students will learn the theory and practice of securities and futures contract trading with a focus on hands-on trading experience using industry software (CQG and Bloomberg) as well use of data sources (Morningstar). In this course, we will review the origins of liquidity, volatility, price efficiency, and trading profits. Next we will cover a host of topics concerning equity and commodity trade execution strategies, such as why and how investors trade, what and when investors profit from investing and speculating, the key principles of high-frequency trading and investor's overconfidence, why market institutions are organized as they are, and the role of public policy in the markets. Cross-listed with CMDT 6490, FNCE 4490 and FNCE 6490. Max hours: 3 Credits.
Grading Basis: Letter Grade

CMDT 4582 - Commodity Supply Chain Management (3 Credits)
This course introduces the design, analysis, management, and control of supply chains as applied to commodities. The course covers integration of processes and systems, relationship management of upstream and downstream supply chain players, and commodity- specific supply chain strategies. Cross-listed with CMDT 6582. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

CMDT 4682 - Commodity Valuation and Hedging (3 Credits)
This course is a practical introduction to commodity markets. Students will learn how commodities are managed in the global markets from a hedgers, speculators and arbitrageurs point of view. Understanding the relationships between commodities and the global economy will be investigated. In addition, commodities will be looked at as an asset class and cross-asset relationships will be studied. Students will be introduced to futures and options markets analysis deploying strategies professional traders use in diverse market conditions. Students will work with the various trading software throughout the course and gain proficiency in real-world trading. Cross-listed with CMDT 6682. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

CMDT 4782 - Commodity Data Analysis (3 Credits)
This course is an applied introduction commodity data analysis. Students will learn how to analyze commodity prices using quantitative and qualitative techniques. Relationships between commodities and the global economy will be investigated. In addition, commodities will be looked at as an asset class and cross-asset relationships will be studied. Students will be introduced to forecasting techniques and be able to develop and evaluate various forecasting models. Students will work with the open source Python software throughout the course and gain proficiency. Topics include: regression analysis, univariate models, non-stationarity, vector autoregressions, cointegration, volatility modeling, principal component analysis, Python programming, and other topics time permitting. Cross-listed with CMDT 6782. Max hours: 3 Credits.
Grading Basis: Letter Grade

CMDT 4802 - Foundations of Commodities (3 Credits)
This course introduces students to the physical aspects of commodities and connects them to the financial markets in which commodities are traded. Fundamental concepts and terminology necessary for understanding commodity production, transportation, economics, financial analysis and marketing are described. Supply chains for several specific commodities are reviewed in detail, as examples of the production and market structure knowledge needed to be successful professional participants in commodity trading capacities. The course also serves a foundation for more focused education in the specific commodity sectors, as well as the applied use of marketing and financial trading concepts learned in other courses. Cross-listed with CMDT 6802 and FNCE 4802/6802. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

Communication (COMM)

COMM 1001 - Presentations and Civic Life (3 Credits)
Democratic life is all about sharing ideas, debating key issues, and creating a sense of community—democracy is communication. This class teaches students how to deliver successful presentations in civic venues. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1011 - Communication and Communities (3 Credits)
All day, every day, we communicate with others. This survey class teaches students the fundamental roles communication plays in our everyday lives, work places, communities, and interpersonal relationships. The course foregrounds the ways different communities practice different methods of communication. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

COMM 1021 - Introduction to Media Studies (3 Credits)
We live in a media-saturated world: radio, TV, film, music, social media, smartphones and more. This class explores how media shape our everyday lives and how recent trends and shifts in media technologies are presenting opportunities for and challenges to democratic processes. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

COMM 1041 - Interpersonal Communication (3 Credits)
Want to learn how to get along with others? How to understand yourself? This class teaches students about self-esteem, the attraction process, nonverbal communication, relationship development, family communication, conflict resolution, and more. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1071 - Introduction to Journalism (3 Credits)
News is the lifeblood of democracy. This class teaches students the histories of, debates within, and best practices for journalism in print, digital, and other media. This class is writing intensive. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 1111 - First Year Seminar (3 Credits)
This is a special seminar format class for incoming first year students; topics vary by semester so check with the instructor. The class is especially helpful for adjusting to life in college. Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

COMM 2017 - Dialogue, Debate, and Disagreement (3 Credits)
This course is designed for bilingual and non-native English speakers who seek to cultivate academic American English writing skills and U.S.-style debate norms. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 2020 - Communication, Citizenship, and Social Justice (3 Credits)
Introduction to debates about and means of practicing citizenship and social justice. Issues may include democratic participation, electoral politics, community engagement, and civil rights. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2021 - Communication and Citizenship (3 Credits)
This course explores the complexities of citizenship in cultural, national, and global forms. The class addresses the roles communication plays in practicing citizenship via such topics as cultivating a sense of belonging, debating the allocation of rights, practicing different modes of civic engagement, and more. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2030 - Digital Democracy (3 Credits)
Constant technological innovation means most Americans experience democracy in online formats; this class equips students with tools for living in our digital age. Topics include analyzing websites, studying online political organizing, and learning how to produce materials for online advocacy. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 2045 - Workplace Communication (3 Credits)
This class focuses on theories and practices of leadership, team-building, relationship development, and other workplace communication skills. Students learn and practice communication strategies for managing workplace challenges. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2050 - Professional Presentations (3 Credits)
Employers value clear, persuasive, and ethical communication. This class develops the communication skills used in business and professional settings, with an emphasis on sharing information, using media, and team-building. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2051 - Introduction to Strategic Communication (3 Credits)
Learn how to lead your organization with coordinated messaging. This class teaches marketing & public relations, targeted political messaging, and organizational communication, and studies how strategic communication works in different media, civic, and professional environments. Students will not receive credit for this class if they have already received credit for COMM 4635. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2071 - Media Writing Skills (3 Credits)
This class covers the major media writing types, including hard or straight news, features, reviews, editorials, web content, and social media, plus notetaking, interviewing, and editing skills. This class is writing intensive. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2075 - Researching and Writing in Comm (3 Credits)
This on-line class enables students to learn the research and writing skills that will enable them to excel in the rest of the classes they take to complete the Communication major. Because the course is intended for Communication majors, our readings and modes of analysis provide students an overview of the discipline in general and of the “Pathways” that structure our major. The class is writing intensive. Term offered: spring, summer, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 2081 - New Media Production and Management (3 Credits)
This course develops skills in producing, distributing, and managing new media content using digital communication platforms; students also learn skills in management, networking, and new media leadership. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2082 - Introduction to Environmental Communication (3 Credits)
Climate change and environmental degradation are just two of numerous environmental crises that are debated, experienced, and shaped by competing interests. This class addresses communication about environmental and climate justice, sustainability, green marketing, and other topics. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 2500 - Introduction to Health Communication (3 Credits)
Health industries are among the fastest growing sectors of the U.S. economy. This class enables students to begin thinking about their health, the health of their communities, and the health of the nation as systems of language and power. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

COMM 3071 - Advanced Media Writing Skills (3 Credits)
This class builds upon the skills learned in COMM 1071 and COMM 2071 by focusing on long-form writing suitable for magazines and websites. This class is writing intensive. Prereq: Students must have completed COMM 2071 with a C- or higher, or receive permission from the instructor, to enroll in this course. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2071 with a C- or higher, or receive permission from the instructor, to enroll in this course.
Typically Offered: Spring.

COMM 3081 - Introduction to Digital Studies (3 Credits)
Develop marketable skills such as building websites, making interactive maps, recording podcasts, and analyzing data while also studying the cultural and ethical dimensions of these technologies. Cross-listed with COMM 5081, HIST 3260, and HIST 5260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3230 - Chinese Communication & Culture in Context (3 Credits)
This course is designed for CU Denver students studying at the ICB program in Beijing. For such students, the course introduces Chinese communication practices and cultural expectations, easing the student's transition into life in Beijing. Field trips are required. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

COMM 3231 - Famous U.S. Trials (3 Credits)
Interested in Law School? . . . This introduction to the history of the U.S. trial court system contextualizes significant trials in historic and cultural moments. The course explores the roles of legal communication and mass communication in contemporary representations of trials. Cross-listed with HIST 3231. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3271 - Communication and Diversity (3 Credits)
Is America a melting pot or a raging fire of animosity? This class explores the complexities of communication across diverse identities such as race, ethnicity, gender, and political affiliation, and attempts to seek common ground by understanding our unique identities. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

COMM 3275 - Family Communication (3 Credits)
Communication within families can be loving, or terrible, or awkward. This class explores family communication processes in traditional and nontraditional families by examining conflict, family secrets, decision-making, and practical guidelines for improved communication patterns. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

COMM 3640 - TV, Culture, & Communication (3 Credits)
This course examines television theories and histories, from broadcast TV to internet streaming. Investigating TV industries and representations, students will gain an understanding of TV's role in contemporary culture. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 3650 - Media and Society (3 Credits)
This class examines the intersections of new communication technologies, popular culture, and their impact on society. The class develops approaches for examining media as a key part of our everyday lives and as an object of scholarly inquiry. Term offered: fall, spring, summer. Prereq: COMM 1021 with a C- or higher or permission from the instructor. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

COMM 3660 - Social Media for Social Change (3 Credits)
Students analyze social media platforms, study and critique social movements that have harnessed the power of social media, and assess social justice events to understand how social media have been used to facilitate social change. Prereq: Students must have completed COMM 1011 and COMM 2020 with a C- or higher, or receive permission from the instructor, to enroll in this course. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must have completed COMM 1011 and COMM 2020 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 3840 - Independent Study (1-3 Credits)
Independent Studies are an ideal vehicle for working one-on-one with a faculty member to produce an original publishable piece of scholarship, or other media format, or a civic engagement project. Speak to your favorite faculty member/teacher about the possibilities. Note: Students must submit a special processing form, completely filled out and signed by the student and faculty member, describing the course expectations, assignments, and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

COMM 3939 - Internship (1-6 Credits)
Employers love work experience, so advance your communication skills while polishing your resume by working with a community leader. Internships enable students to gain entry level experience while exploring career interests and working environments; to apply course theory and concepts to build communication skills in a workplace of their choosing; and to develop a portfolio to showcase their career-focused assets. Note: This course fulfills the communication department's exit class requirement. Prereq: Students must have completed 15 credit hours at CU Denver and have a 2.75 GPA overall and must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

COMM 4000 - Communication and Sport (3 Credits)
While sports are often sought for entertainment, they are more than just a game: they both mirror and shape our understandings of gender, race, class, sexuality, ability, nationality and more. This class addresses these issues while also thinking about sports in global frameworks. Cross-listed with COMM 5000. Term offered: fall, spring. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4015 - Communication and Civility (3 Credits)
Examines the central role of communication in the creation of a civil and humane society. The definition, understanding, and practices of civility in public discourse and in professional, social, and personal relationships are explored. Film, literature, music, and other texts are utilized to illustrate key concepts and serve as catalysts for discussion. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4020 - Feminist Perspectives on Communication (3 Credits)
For thousands of years, men have run the show—feminism challenges that injustice by inviting us to imagine more equitable ways of being in the world. This class examines major feminist thinkers to imagine different communication paradigms. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

COMM 4021 - Perspectives on Rhetoric (3 Credits)
Rhetorical criticism is the study of how language works to persuade. This class surveys major thinkers to offers students a range of methods, which are then applied to address specific case studies. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5021. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4022 - Critical Analysis of Communication (3 Credits)
Are your beliefs rooted in facts or fictions, or a little of both? Does your race, or nationality, or gender influence your beliefs? This class surveys the research methods used to analyze messages from a range of critical perspectives. Cross-listed with COMM 5022. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4031 - Perspectives on Communication (3 Credits)
This class reviews major theories for studying communication, demonstrating that the field of communication is an amalgam of differing, and sometimes clashing, perspectives. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4040 - Communication, Prisons, and Social Justice (3 Credits)
This class examines the U.S. prison-industrial complex and enables students to envision ways of reducing crime and improving democracy by engaging in community service. Note: This course fulfills the communication department's exit class requirement. Strongly Recommended: Students complete COMM 2020 or COMM 2030 prior to taking this class. Cross-listed with COMM 5040. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4051 - Advanced Strategic Communication (3 Credits)
Provides senior-level training in hands-on communication environments where targeted messaging seeks specific outcomes. All students complete projects for community group, media outlet or corporation they choose. Students will not receive credit for this class if they have already received credit for COMM 4640. Note: This course fulfills the communication department's exit class requirement. Prereq: Students must have completed COMM 2051 or COMM 2071 or COMM 3680 with a C- or higher, or receive permission from the instructor, to enroll in this course. Cross-listed with COMM 5051. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must have completed COMM 2051 or COMM 2071 or COMM 3680 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 4082 - Wilderness Communication (3 Credits)
This class engage issues of wilderness, communication, and environmental sustainability. Students read philosophical, theoretical, and academic literature on human symbolic constructions of wilderness. Field trips may be involved; talk to the instructor. Cross-listed with COMM 5082. Term offered: summer, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

COMM 4111 - Theories of Leadership (3 Credits)
This class examines research and applications related to the major theories of leadership, and offers students the skills for practicing justice-based leadership. Cross-listed with COMM 5111. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with INTS 4152, RLST 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4215 - Ethics in Communication (3 Credits)
Designed to help students identify and address the daily ethical challenges that occur in private, social, and professional contexts. Focus is on recognizing, analyzing, and resolving real-world ethical dilemmas using diverse approaches to ethical decision making. Cross-listed with COMM 5215. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4221 - Research Methods: Qualitative (3 Credits)
This class applies qualitative research methods to human communication practices, including the processes of designing qualitative studies, collecting data, analyzing and interpreting data, and reporting results. Cross-listed with COMM 5221. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4230 - Nonverbal Communication (3 Credits)
We all speak volumes without using words. This class studies nonverbal behaviors that accompany or replace verbal communication, including facial expressions, eye contact, gestures, vocal characteristics, touch and personal adornment. Cross-listed with COMM 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4240 - Organizational Communication (3 Credits)
Churches, schools, companies, NGOs, the government—these are all organizations. This class addresses the theories of how organizations succeed or fail and stresses functional workplace skills and practices. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5240. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4245 - Advanced Organizational Communication (3 Credits)
We all live our lives embedded in organizations. This class builds on COMM 4240 to explore theoretical perspectives on communication in complex organizations. Students analyze assumptions and craft pragmatic solutions. Cross-listed with COMM 5245. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4255 - Negotiations and Bargaining (3 Credits)
This class engages Principled Negotiation theory and practice and involves numerous negotiation simulations. These are skills-based exercises that emphasize communication strategies and traverse a number of different negotiation contexts. Through the simulations, both group and dyadic work is practiced. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5255. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Summer.

COMM 4260 - Communication and Conflict (3 Credits)
Sometimes it seems like our days are full of conflict—why is that? This class studies the influence of communication on intrapersonal, interpersonal, intragroup, and intergroup conflict situations, and offers communication skills for building better relationships. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5260. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4262 - Mediation (3 Credits)
Knowing how to help find mutually satisfying resolutions to conflict is a terrific life skill. This class explores theoretical and practical aspects of mediation in a variety of contexts ranging from divorce mediation to labor-management disputes. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5262. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4265 - Gender and Communication (3 Credits)
Gender is constructed, performed, evaluated, and negotiated in our daily lives. This class explores scientific research on gender, gender stories in popular culture, the process of crafting and performing gender stories, and responses to gender performances. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5265. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

COMM 4268 - Communication and Diversity in U.S. History (3 Credits)
Explores issues of diversity and community in the construction of U.S. culture. Emphasis on legal and historical texts that codify or challenge majoritarian notions of difference and systems of social control. Cross-listed with COMM 5268. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4270 - Intercultural Communication (3 Credits)
The age of globalization means we are all neighbors, working across national boundaries and even continents. This class examines the philosophies, processes, problems, and potentials unique to communicating across cultures to address issues of social justice and ethical intercultural practices. We will consider the important role of context in interactions across cultures and subcultures, globally, transnationally, and within the U.S. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5270 and INTB 6270. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4280 - Communication and Change (3 Credits)
Examines the role of communication in change processes of various kinds, including social change and diffusion of innovations. Cross-listed with COMM 5280. Prereq: COMM 2082 with a C- or higher or permission from the instructor. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2082 with a C- or higher.

COMM 4282 - Environmental Communication (3 Credits)
Our world is shaped by policies and practices that threaten life on Earth. With such high stakes for making a more livable, just, and equitable future, this course examines storytelling, naming, framing, and the other communication concepts that are essential for navigating our shared planet. Prereq: COMM 2082 with a C- or higher permission from the instructor. Cross-listed with COMM 5282. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2082 with a C- or higher.
Typically Offered: Spring.

COMM 4290 - Web Design (3 Credits)
Covers writing web pages in HTML, beginning Photoshop, style sheets, bitmapped animations, issues of usable layout, navigability, structure, typography, and color on the web. Projects require students to develop static web sites. Cross-listed with COMM 5290. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4300 - Multimedia Authoring (3 Credits)
Analysis and evaluation of components of multimedia development and hands-on instruction featuring computer animation for advertising, training, and educational projects. Cross-listed with COMM 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4430 - Communication, China, and the US (3 Credits)
This course provides a senior-level opportunity to study how China and the USA have spoken about and to each other, from the Opium War through the Cyber Wars, thus situating both nations in a world of globalizing communication and interdependence. Note: this course fulfills the communication department's exit class requirement. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5430. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4500 - Health Communication (3 Credits)
This class examines the role of communication in a wide range of health contexts. Topics include cultural constructions of health and illness, public health communication campaigns, client-provider interactions, telemedicine, community-based health programs, and medical journalism. Note: This course fulfills the communication department's exit class requirement. Cross-listed with COMM 5500. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4525 - Health Communication and Community (3 Credits)
This course provides a broad knowledge base about health disparities and culturally competent frameworks in healthcare by enabling students to engage in service learning projects with local health-related community groups. Note: this course fulfills the communication department's exit class requirement. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4550 - Rhetorics of Medicine & Health (3 Credits)
This senior seminar explores why it matters how we talk and think about medicine and health. Case studies explore contagion, contested illnesses, the body, death, and biopower. The course requires extensive discussion of readings and an original research project. Note: This course fulfills the communication department's exit class requirement. Cross-listed with COMM 5550. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

COMM 4557 - Crisis and Emergency Communication (3 Credits)
This course examines strategic communication practices throughout the three stages of a crisis or emergency event. Special emphasis is placed on crisis planning, emergency messaging, media relationships, image restoration, ethical responses, and organizational learning. Cross-listed with COMM 5557, PUAD 4620, and PUAD 6620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4558 - Digital Health Narratives (3 Credits)
This course blends readings, discussions, and activities about health narratives with digital media production skills to teach students how to create compelling digital stories about health-related topics. Students produce digital messages for the community group of their choosing. Note: this course fulfills the communication department's exit class requirement. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5558. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

COMM 4575 - Designing Health Messages (3 Credits)
Examines the roles of communication in the design and impact of health messages/campaigns. We will design and assess health communication messages/campaigns in a participatory, process#oriented way using varied communication tools. Cross-listed with COMM 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4600 - Media Theory (3 Credits)
Surveys a broad array of critical and interpretive approaches to the study of media. Approaches include political economic, semiotic, rhetorical, psychoanalytic, feminist, and cultural. Cross-listed with COMM 5600. Max Hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4601 - You Are What You Eat: Food as Communication (3 Credits)
Food is a source of identity, culture, and belonging. It communicates heritage and belonging. Because food provides communication channels for much of who we are as individuals, as a community, and as a society, this course analyzes food as a form of communication. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5601. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

COMM 4610 - Communication, Media, and Sex (3 Credits)
This class develops the tools to think critically about representations of sexuality and to understand the social construction of sexuality, the role of sexual representations in mass media and society, and the complex relationships between sexual acts, identities, and desires. Restriction: Restricted to class level Junior, Senior, or permission of instructor. Cross-listed with WGST 4610. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4611 - Rhetoric of Global Food Policy (3 Credits)
This course examines stakeholder relations, agendas, and debates about global food policy using rhetorical concepts and analysis. Topics include the framing of debates about agriculture, hunger and obesity, the greening of food governance, sustainable food systems, and more. This course fulfills the communication department's pathway course requirement. Cross-listed with INTS 4611. Prereq: Junior standing or higher. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4620 - Health Risk Communication (3 Credits)
We are bombarded all day with communication expressing a sense of risk, of danger, of threats to our individual and communal well-being. This class acquaints students with contemporary theory, research, and practice in health risk communication across a variety of threats both real and imagined. Strongly Recommended: COMM 4500. Cross-listed with COMM 5620, ENVS 5620, and PBHL 4620. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4621 - Visual Communication (3 Credits)
If an image is worth a thousand words, then what happens when we ingest thousands of visual images each day? This class explores the social, cultural, and behavioral effects of visual images in a variety of contexts, including graffiti, film, advertising, art, and architecture. Prereq: COMM 1021 with a C- or higher. Cross-listed with COMM 5621. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Spring.

COMM 4660 - Queer Media Studies (3 Credits)
Queer Media Studies, a discussion-based seminar, investigates the history of a variety of LGBTQ+ media — including news, film, television, comics, games, music, and the Internet. Students engage in a variety of media projects to explore LGBTQ+ histories, queer aspects of media production, reception, and media messages. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 5660, WGST 4660, WGST 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4665 - Principles of Advertising (3 Credits)
Provides a fundamental understanding and appreciation of advertising in today's global society, including consumer motivation, buying behavior, research, creative development, and media planning. Prereq: COMM 1021 with a C- or higher. Cross-listed with COMM 5665. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

COMM 4680 - Mass Media Law And Policy (3 Credits)
Covers issues of mass communication and the law and ethics, including issues of the First and Fourth Amendments, communication regulations, intellectual property, public access and obscenity. Cross-listed with COMM 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4681 - Communication Issues in Trial Court Practices and Processes (3 Credits)
Introduces students to communication and language research aimed at improving the fairness, reliability, and validity of court and judicial processes, including lawyer-client interviews, interrogatories, jury selection, jury instructions, witness examination, and the use of language evidence in court. Strongly Recommended: ENGL 2030. Cross-listed with COMM 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4682 - Political Communication (3 Credits)
Examines the communication processes involved in mediated political events. Topics include the stages of the campaign process, media coverage of the political campaign process, and literacy skills needed to understand political advertising. Cross-listed with COMM 5682. Prereq: COMM 2020 or COMM 2030 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2020 or COMM 2030 with a C- or higher.
Typically Offered: Fall.

COMM 4683 - Media in the Courtroom (3 Credits)
Law and Media: From the ever-present onscreen legal dramas and criminal procedurals to the presence of media in real-life courtrooms, law and media are hopelessly intertwined in the US. This course examines how televised versions of law potentially impact real-life courtrooms and vice versa. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

COMM 4688 - Senior Seminar: Transitioning from College to Career (3 Credits)
Ready to graduate? Then take this class, which prepares students to enter the job market and to integrate and reflect on their experience in communication. Must have senior standing. This course fulfills the communications department's exit course requirement. Restriction: Restricted to students with senior standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

COMM 4700 - Thesis and Project Practicum (3 Credits)
Focuses on strategies of research design and writing for undergraduate students working on theses for Latin honors. Students pick their own research topics. Note: This course fulfills the communication department's exit class requirement. To be eligible to enroll in this course you must be a senior majoring in communication, have a cumulative GPA of 3.0 and have a GPA in your communication coursework of 3.5. Cross-listed with COMM 6700. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

COMM 4710 - Topics in Communication (1-3 Credits)
Special classes for faculty-directed experiences examining communication issues and problems not generally covered in the curriculum. Cross-listed with COMM 5710. Term offered: fall, spring, summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

COMM 4720 - Dynamics of Global Communication (3 Credits)
This class explores global communication dynamics by analyzing the relationships between world media, international events, economics, and geopolitics. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with COMM 5720. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

COMM 4722 - Communicating Latinx Cultures (3 Credits)
Communicating Latina/o/x Cultures centers historical and contemporary vernacular and institutional discourse sand narratives about, by, and for Latina/o/x people and communities. Drawing on theories, methods, and practices to understand the complexities of Latina/o/x cultures and lives, we will investigate how different actors and activists express and experience borders, migration, dispossession, citizenship, colonialism/coloniality, colorism, white supremacy, environmental racism(including anti-Blackness), mono- and multilingualism, self-determination struggles, power, representation, resistance, and mutual support networks for alternative worldmaking. To situate these concepts and concerns, we will explore contexts and places ranging from Colorado to the Caribbean. Term Typically Offered: Spring. Cross-listed with COMM 5722, ETST 4722, and ETST 5722. Max hours: 3 credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

COMM 4750 - Legal Reasoning and Writing (3 Credits)
Introduces the fundamentals of legal reasoning and legal argumentation through intensive class discussion, formal debate and writing. Attention is given to the relationship between case and statutory law and their application in trial and appeals courts in the United States. Strongly Recommended: ENGL 1020, ENGL 2030 and any 3000 level English course. Cross-listed with COMM 5750, PSCI 4757, 5747. Max hours: 3 Credits.
Grading Basis: Letter Grade

COMM 4760 - New Media and Society (3 Credits)
Does social media foster democracy and social justice or does it spread misinformation and extremism? In this course, students will investigate the social and political aspects of new media by examining the complex relationships between media technologies, industries, and society. Prereq: COMM 1021 and COMM 2020 with a C- or higher. Cross-listed with COMM 5760. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 1021 and COMM 2020 with a C- or higher.
Typically Offered: Fall, Spring.

COMM 4840 - Independent Study (1-3 Credits)
Independent Studies are an ideal vehicle for working one-on-one with a faculty member to produce a publishable piece of scholarship, or other media format, or a civic engagement project. Speak to your favorite teacher about the possibilities. Note: Students must submit a special processing form, completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

COMM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form, filled out and signed by the student and faculty member, describing the course expectations, assignments, and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

COMM 4995 - Global Study Topics (1-15 Credits)
Go see the world! This course is reserved for CU Denver faculty-led study abroad experiences. Versions go to China, Guatemala, Spain, Italy, and others. Destinations vary based on the semester so check with the Department for details. Students register through the Office of Global Education. Term offered: fall, spring, summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Fall, Spring, Summer.

Computer Science (CSCI)

CSCI 1001 - Computer Forensics I (3 Credits)
Topics covered: how to conduct a computer forensic exam; how an individual can hide data on a computer; how the investigator can find that hidden data.This course will also incorporate hands-on learning through the use of a forensic software package.(Non-CS majors) Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CVEN 1200, ENGR 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1350 - Introduction to Computing in Society (3 Credits)
This is an introductory course for individuals who would like to learn about the field of computer science, how modern computing is affecting society, and the basics of computer programming. We will explore how computing has changed society, how intertwined in our daily lives computer programs have become, and how these programs are created. We will explore these topics while learning the basics of computer programming with a modern programming language. Prereq: High School Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab.

CSCI 1410 - Fundamentals of Computing (3 Credits)
First course in computing for those who will take additional computer science courses. Covers the capabilities of a computer, the elements of a modern programming language, and basic techniques for solving problems using a computer. Coreq: CSCI 1411. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: CSCI 1411.

CSCI 1411 - Fundamentals of Computing Laboratory (1 Credit)
This laboratory is taken with CSCI 1410 and will provide students with additional help with problem solving and computer exercises to compliment the course material covered in CSCI 1410. Coreq: CSCI 1410. Max Hours: 1 Credit.
Grading Basis: Letter Grade
D-En CO: CSCI 1410 coreq

CSCI 1510 - Logic Design (3 Credits)
The design and analysis of combinational and sequential logic circuits. Topics include binary and hexadecimal number systems, Boolean algebra and Boolean function minimization, and algorithmic state machines. Lecture/lab includes experiments with computer-aided design tools. This course requires the level of mathematical maturity of students ready for Calculus I. Max hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 1800 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CSCI 2002 - Computer Forensics II (3 Credits)
This is a continuation of CSCI 1001 This course will cover: computer forensics for advanced operating systems (Mac, Linux, and Unix) and mobile device forensics. This course will incorporate hands-on-learning by utilizing a computer forensics software package. (Non CS majors) Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 1001

CSCI 2132 - Circuits and Electronics (3 Credits)
This course is designed to serve as the basic course in CSE curriculum for second year bachelor students. It introduces the fundamentals of the analog and digit circuit abstraction and applications. Topics include: resistive elements, networks, sources, switches, MOS transistors, digital abstraction, amplifiers, energy storage elements. A web-based laboratory will allow students to have hands-on experiments. Prereq: MATH 2411, PHYS 2331, and CSCI 1510. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 1510, MATH 2411, and PHYS 2331

CSCI 2312 - Object Oriented Programming (3 Credits)
Programming topics in a modern programming language. The emphasis is on problem solving using object oriented and Generic Programming. Topics include advanced I/O, classes, inheritance, polymorphism and virtual functions, abstract base classes, exception handling, templates, and the Standard Template Library. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411

CSCI 2421 - Data Structures and Program Design (3 Credits)
Topics include a first look at an algorithm, data structures, abstract data types, and basic techniques such as sorting, searching, and recursion. Programming exercises are assigned through the semester. Prereq: CSCI 2312 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2312 with a grade of C- or higher.

CSCI 2511 - Discrete Structures (3 Credits)
Covers the fundamentals of discrete mathematics, including: logic, sets, functions, asymptotics, mathematical reasoning, induction, combinatorics, discrete probability, relations and graphs. Emphasis on how discrete mathematics applies to computer science in general and algorithm analysis in particular. Prereq: MATH 1401 with a C- or higher (Calculus I). Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher

CSCI 2525 - Assembly Language and Computer Organization (3 Credits)
Topics include computer architecture, program execution at the hardware level, programming in assembly language, the assembly process, hardware support of some high-level language features, and a program's interface to the operating system. Programming exercises are assigned in this course. These exercises involve the use of specific hardware in designated laboratories. Prereq: Grade of C- or higher in the following courses: CSCI 1410, CSCI 1411 and CSCI 1510. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410, CSCI 1411 and CSCI 1510.

CSCI 2571 - Fundamentals of UNIX (3 Credits)
Introduces the UNIX operating system and its family of related utility programs. History and overview, versions, and common features. File operations, utilities, shells, editors, filters and data manipulation. Shell programming communications and networking, windowing environments, mail and Internet. Programming tools. Simple system administration. Credit will not count toward BSCSE degree. Prereq: Familiarity with operating systems and/or a programming course. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 2800 - Special Topics (3 Credits)
Max Hours: 3 Credits.
Grading Basis: Letter Grade

CSCI 2940 - NAND to Tetris: Foundations of Computer Systems (3 Credits)
Introduces the principles of computer systems that underlie the global information age. Starting from first principles, students gradually construct a simple hardware platform and a modern software hierarchy, yielding a working basic yet powerful computer system. Only introductory programming experience is required. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 3300. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 2941 - Game Design and Development I (3 Credits)
Introduces principles of computer game development, building on the rich interplay of computer science, graphics design, physics, music, and narrative. Students develop interactive 2D and 3D games and a final project. Substantial software development involved, but requires only introductory programming experience. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 3400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 2942 - IoT: The Internet of Things (3 Credits)
In a world where everything is connected to everything else, how does that work? This course introduces techniques for (1) designing systems that can sense the environment and respond to humans in meaningful ways and (2) creating networks of physical objects that collect and exchange data. Such systems might include wearable sensors, interactive art, and Internet-connected home devices. Working individually and in teams, students will develop projects using Inworks' materials, devices, and fabrication tools. The course involves considerable prototyping and software development but requires only introductory programming and prototyping experience. Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411. Cross-listed with IWKS 4120. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 1410 and CSCI 1411.

CSCI 3287 - Database System Concepts (3 Credits)
Introduces database design, database management systems, and the SQL standard database language. Includes data modeling techniques, conceptual database design, theory of object-relational and relational databases, relational algebra, relational calculus, normalization and database integrity. Prereq: Grade of C- or higher in the following courses: ENGL 1020 and CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: ENGL 1020 and CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3320 - Advanced Programming (3 Credits)
The course will cover a wide range of advanced programming topics via focusing on development of cross-platform applications.The focus will be on problem solving and developing applications with modern languages (such as C++, Java, Objective-C) & frameworks, including Xcode, Angularjs (with Javascript, HTML5, CSS), Phonegap, & Webstorm. Prereq: CSCI 2421. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421 with a C- or higher.

CSCI 3412 - Algorithms (3 Credits)
Design and analysis of algorithms. Asymptotic analysis as a means of evaluating algorithm efficiency. The application of induction and other mathematical techniques for proving the correctness of an algorithm. Data structures for simplifying algorithm design, such as hash tables, heaps and search trees. Elementary graph algorithms. Assignments include written work and programming projects. Prereq: Grade of C- or higher in the following courses: CSCI2421 and 2511. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 2421 and 2511. Restricted to Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3415 - Principles of Programming Languages (3 Credits)
Introduces programming language design concepts and implementation issues. Includes language concepts such as control structures and data types, formal language specification techniques, and syntactic and semantic implementation issues. Prereq: Grade of C- or higher in the following courses: CSCI 2421 and CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 2421 and CSCI 2525. Restricted to undergraduate Computer Science Majors and Minors and Cybersecurity Majors.

CSCI 3453 - Operating System Concepts (3 Credits)
Covers the principles of computer operating systems and the essential components of an operating system. Topics include: I/O devices, file systems, CPU scheduling and memory management. Prereq: Grade of C- or higher in the following courses: CSCI 3412 and CSCI 2525. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCI 3412 and CSCI 2525. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 3508 - Introduction to Software Engineering (3 Credits)
Introduces principles and practices of software engineering: software life-cycle models, requirements engineering, analysis and design tools, human factors risk management, program certification, project management and intellectual property rights. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 3511 - Hardware-Software Interface (3 Credits)
Hardware and software techniques needed to control and program device interfaces. Input and output devices, computer peripherals, device drivers and interfaces are introduced. Specific programmable devices are used in class projects. Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3515 - Internet of Things: Sensing, Communication & Control (3 Credits)
The Internet of Things (IoT) is transforming our physical world into a complex and dynamic system of connected devices on an unprecedented scale. This course covers the basic components of IoT systems: sensing, communication, control, and power supply, as well as case studies on the design of real-world IoT applications, including voice authentication, activity monitoring, and battery management. This course integrates both the theories/science of IoTs and their hands-on implementation, as well as the basic practice of data collection, processing, analysis, and visualization. Prereq: CSCI 2421 with a C- or higher. Restriction: Restricted to Computer Science majors and minors (CSCI-BS, CSCS-BA, and CSCI-MIN). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421 with a C- or higher. Restriction: Restricted to Computer science majors and minors (CSCI-BS, CSCS-BA, and CSCI-MIN)

CSCI 3560 - Probability and Computing (3 Credits)
Events and probability. Discrete random variables. Moments of random variables. Conditional probability and expectation. The probabilistic method. Markov chains and random walks. Continuous distributions and the Poisson process. Entropy, randomness and information. Randomized algorithms. Prereq: Grade of a C- or higher in CSCI 2511 and MATH 2411. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of a C- or higher in CSCI 2511 and MATH 2411. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3740 - Computer Security (3 Credits)
Introduces basic knowledge from the computer security area. Topics covered in this course include: Cybersecurity Ethics, Penetration Testing, Secure Programming Practices, and Life-Cycle Security. Students will gain the understanding of ethics in cybersecurity with the tools for ethical decision making, learn methods of exploiting vulnerabilities and perform penetration testing on a simple network, understand the characteristics of secure programming with the ability to implement programs that are free from vulnerabilities, and understand security related concerns in a system Life-Cycle and how security principles can be applies to improve security throughout a system. Prereq: CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 3751 - Fundamentals of UNIX (3 Credits)
Introduces the UNIX/Linux operating system and its family of related utility programs. History and overview, versions, and common features. Common basic commands, file and process operations, utilities, shells, intro the vi editor, filters, and data manipulation. Shell programming communications and networking, windowing environments (X window). Programming tools (gdb). Simple system administration. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.
Typically Offered: Fall.

CSCI 3761 - Introduction to Computer Networks (3 Credits)
Introduction and overview of computer networks. Topics include Internet protocols, network devices, network security, and performance issues. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 3762 - Network Programming (3 Credits)
Network Programming. This class involves creating and implementing networking protocols that help students delve deeper into the concepts introduced in CSCI 3761. The course requires hands on sockets-based programming at the TCP and UDP level. The course explores and focuses on real-world networking problems. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.
Typically Offered: Spring.

CSCI 3800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to Computer Science Majors and Minors (CSCS-BA, CSCI-BS, CSCI-MIN, CMSC-MS)

CSCI 3810 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Credit will not count toward BS Computer Science degree. Restriction: Restricted to BA Computer Science Majors (CSCS-BA). Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to BA Computer Science Majors.
Typically Offered: Fall, Spring.

CSCI 3840 - Independent Study: CSCI (1-3 Credits)
Restriction: Restricted to undergraduate Computer Science Majors and Minors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to undergraduate Computer Science Majors and Minors.

CSCI 3916 - Web API (3 Credits)
JavaScript Web technologies for front-end development and back-end development. Building a full end to end solution with a mobile or web front-end, Web API and NoSQL database. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors

CSCI 3920 - Advanced Programming with Java and Python (3 Credits)
This course introduces the fundamental concepts to develop programs and projects using modern software engineering techniques using two different programming languages (Java and Python). It will cover and apply pattern design approaches, reusable components driven by everyday needs within many software developments, the relationships between object oriented programming concepts and software design concepts. It will dig deeper into techniques to program single threaded applications as well as advanced techniques to construct concurrent and distributed applications. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors

CSCI 3963 - Network Structures (3 Credits)
This interdisciplinary course examines how the technological, social and economic worlds are connected and how the study of networks sheds light on these connections. Topics include: how opinions spread through society; the robustness and fragility of financial networks; the technology and economics of Web information and on-line communities. Prereq: Grade of C- or higher in MATH 2411. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 2411. Restricted to Computer Science Majors and Minors.

CSCI 4034 - Theoretical Foundations of Computer Science (3 Credits)
Introduces abstract models for computation, formal languages and machines. Topics include: automata theory, formal languages, grammars and Turing machines. Prereq: Grade of C- or higher in CSCI 3412. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412. Restricted to Computer Science Majors, Minors, Cybersecurity Majors, and CSSC Certificate.

CSCI 4110 - Applied Number Theory (3 Credits)
Every year, Topics include divisibility, prime numbers, congruences, number theoretic functions, quadratic reciprocity, special diophantine equations, cryptography, computer security, and engineering applications. Cross-listed with CSCI 5110. Prereq: Grade of C- or higher in one of the following courses: MATH 3000 or CSCI 2511. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3000 or CSCI 2511. Restricted to Computer Science Majors and Minors.

CSCI 4172 - Complexity and Problem Solving (3 Credits)
Theoretical and practical aspects of solving complex problems, in particular, but not limited to, NP-complete and PSPACE-complete problems. Various heuristic and approximation algorithms, including greedy, ant, and Genetic Algorithms will be studied. This course is by instructor's permission only. Prereq: Grade of C- or higher in CSCI 4034. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4034. Restricted to Computer Science Majors and Minors.

CSCI 4173 - Computational Complexity and Problem Solving (3 Credits)
Solid, in-depth theoretical foundation in computing, computational complexity, and algorithmics. Additional topics include various algorithms for both discrete and non-discrete problem domains. Models of Computation, Computational Complexity, Time Complexity Classes, Space Complexity Classes, The Theory of NP-completeness. Prereq: Grade of C- or higher in CSCI 4034. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4034. Restricted to Computer Science Majors and Minors.

CSCI 4202 - Introduction to Artificial Intelligence (3 Credits)
Topics include heuristic search, games playing algorithms, application of predicate calculus to AI, introduction to planning, application of formal grammars to AI. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4203 - Simulation (3 Credits)
This class in simulation spans three different disciplines: Computer Science, Modeling and Simulation, and Analysis. These will have approximately equal weight with respect to this class, but with more breadth in the Modeling and Simulation and Analysis disciplines and more depth in the supporting Computer Science topics. Excursions are planned for agent-based simulations, knowledge-based simulations, and animation and visualization of simulation results. Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science majors and minors. Cross-listed with CSCI 5203. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).
Typically Offered: Fall.

CSCI 4211 - Mobile Computing and Programming (3 Credits)
This course contains two main simultaneous tracks, namely mobile computing and mobile programming. A series of lectures on various aspects of mobile computing provides an understanding of challenges and solutions in design and implementing mobile systems. The main topics include mobile sensing, human mobility and its technical implication. Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4220 - Social Networks & Informatics (3 Credits)
The main topics covered by the course will include 1) social network data structures, 2) basic random graph models and graph algorithms; 3) recommendation systems and predictive models 4) query suggestion and content analysis 5) link analysis and community detection 6) the spread of information, disease, and influence on networks. This course builds a solid foundation in social informatics technology. Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Cross-listed with CSCI 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Programs restricted to: CSCI-BS, CSCS-BA, CSCI-MIN.

CSCI 4287 - Embedded Systems Programming (3 Credits)
Embedded Systems Programming happens across a spectrum of Domains. Embedded Systems Programming in the Small is characterized by the creation of small applications in high volumes. Embedded Systems Programming in the Large is characterized by the creation of medium to large applications in one-off or low volumes using specialized Operating Systems such as Real-time Operating Systems. Students will current languages, and are expected to have basic Operating Systems understanding. Prereq: Graded with C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4407 - Security & Cryptography (3 Credits)
A broad overview of cryptography and its relation to computer security. Topics include basic standard cryptographic techniques, a history of codes and ciphers, RSA, DES, AES, Elliptic Curve Cryptography, ElGammal, and applications to current and future technologies. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Cross-listed with CSCI 5407. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4408 - Applied Graph Theory (3 Credits)
Introduces discrete structures applications of graph theory to computer science, engineering and operations research. Topics include connectivity, coloring, trees, Euler and Hamiltonian paths and circuits. Matching and covering problems, shortest route and network flows. Prereq: Grade of C- or higher in one of the following courses: MATH 3000 or CSCI 2511. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3000 or CSCI 2511. Restricted to Computer Science Majors and Minors.

CSCI 4411 - Computational Geometry (3 Credits)
Many practical and aesthetic algorithmic problems have their roots in geometry. Applications abound in the areas of computer graphics, robotics, computer-aided design, and geographic information systems, for example. A selection of topics from convex hull, art gallery problems, ray tracing, point location, motion planning, segment intersection, Voronoi diagrams, visibility and algorithmic folding will be covered. Cross-listed with CSCI 5411. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4455 - Data Mining (3 Credits)
Introduces concepts, techniques and methodologies to discover patterns in data. Topics include (but are not limited to) data preprocessing and cleansing, data warehousing, pattern mining, classification, prediction, cluster analysis, outlier detection, and online data analytics. Prereq: Grade of C- or higher in the following coures: MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5455. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4501 - Java (3 Credits)
Comprehensive course on Java programming. Coverage of programming language constructs of Java and the core libraries that come with Java: coverage of advanced topics, including technologies for building distributed applications, and interacting with a database. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restricted to Computer Science Majors and Minors.

CSCI 4551 - Parallel & Distributed Computing (3 Credits)
Examines a range of topics involving parallel and distributed computing. Topics include language constructs for concurrency, work distribution, synchronization, and communication. Throughout, design of example scientific computing algorithms for parallel and distributed computation will be introduced. Prereq: Grade of C- or higher in Math 3195 (or both MATH 3191 and MATH 3200), CSCI 3415 & CSCI 3453. Restricted to Computer Science Majors and Minors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in Math 3195 (or both MATH 3191 and MATH 3200), CSCI 3415 CSCI 3453. Restricted to Computer Science Majors and Minors.

CSCI 4555 - Compiler Design (3 Credits)
Introduces the basic techniques used in translating programming languages: scanning, parsing, symbol table management, code generation, code optimization and error recovery. Prereq: Grade of C- or higher in CSCI 3412 and CSCI 3415. Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412 and CSCI 3415. Restricted to Computer Science Majors and Minors.

CSCI 4565 - Introduction to Computer Graphics (3 Credits)
Introduces two and three dimensional computer graphics. Topics include scan conversion, geometric primitives, transformation, viewing, basic rendering, and illumination. Emphasis is on programming using "C" and "C ++" Open GL. Prereq: Grade of C- or higher in CSCI 3412 and (MATH 3191 or MATH 3195). Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5565. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: Grade of C- or higher in CSCI 3412 and (MATH 3191 or MATH 3195). Restricted to Computer Science Majors and Minors.

CSCI 4570 - Virtual and Augmented Reality (3 Credits)
This course covers the fundamental concepts and technologies of virtual and augmented reality, and it introduces recent advances in the field. Topics include 3D user interaction, immersive environments, tele-presence, mobile AR, human perception, and VR/AR applications. Restricted to computer science majors and minors. Pre-requisite: CSCI 3412. Cross-listed with CSCI 5570. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412. Restriction: Restricted to computer science majors and minors. Programs restricted to: CSCI-BS, CSCS-BA, CSCI-MIN.

CSCI 4580 - Data Science (3 Credits)
Introduces concepts and techniques that enable data cycle from data extraction to knowledge discovery, including but not limited to data exploration, hypotheses testing, data organization, data featurization, supervised and unsupervised data modeling and learning, scaling-up analytics, and data visualization. Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors & Minors. Cross-listed with CSCI 5580. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4591 - Computer Architecture (3 Credits)
Deals with how assembly language maps to hardware, and basic hardware techniques implemented in computers. Topics include logic design of arithmetic units, data control path processor logic, pipelining, memory systems, and input-output units. The emphasis is on logic structure rather than electronic circuitry. Students must know basic control logic design and be familiar with an assembly language before taking this course. Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2525. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors.

CSCI 4620 - Computational Motor Control (3 Credits)
This course introduces techniques for the modeling, simulation and control of movement. These techniques come from computer graphics, robotics and machine learning. The topics that we will cover include robot modeling, trajectory optimization, feedback control, deep reinforcement learning, the neuroscience of movement, and neural network models of the brain. At the end of the course, students will learn how train control policies for virtual agents in computer animation or robotics applications. Prereq: Grade of C- or higher in CSCI 3412 & familiarity with Linear Algebra. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4630 - Linguistic Geometry (3 Credits)
Linguistic Geometry (LG) is a type of Game Theory in Artificial Intelligence, which permits to overcome combinatorial explosion and generate optimal strategies in real time. LG is currently changing the paradigm of military command and control in the USA and abroad. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5619. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4640 - Universal Compiler: Theory and Construction (3 Credits)
Theoretical foundations and step-by-step hands-on experience in the development of a compiler, which can tune itself to a new programming language. This is a must-take course for future software developers as well as those interested in applications of the theory of Computer Science. Cross-listed with CSCI 5640. Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4650 - Numerical Analysis I (3 Credits)
A first semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Rounding errors and numerical stability of algorithms; solution of linear and nonlinear equations; data modeling with interpolation and least-squares; and optimization methods. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CSCI 1410). Prereq: MATH 3191 or MATH 3195 with a C- or higher. Cross-listed with CSCI 5660, MATH 4650, and MATH 5660. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 or MATH 3195 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

CSCI 4660 - Numerical Analysis II (3 Credits)
A second semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Numerical differentiation and integration; random numbers and stochastic modeling; Fast Fourier Transform; data compression; eigenvalues and singular value decompositions with application to regression and dimension reduction. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CS 1410). Restricted to Computer Science Majors. Cross-listed with CSCI 5661, MATH 4660 and 5661. Term offered; fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), MATH or CSCI 4650 or 5660 and programming experience. Restricted to Computer Science Majors.
Typically Offered: Fall.

CSCI 4702 - Big Data Mining (3 Credits)
Introduces techniques to discover patterns in Big Data. Selected topics: scalable high-dimensional data clustering, scalable dimensionality reduction, locality sensitive hashing, PageRank, scalable data stream filtering and querying, and scalable classification, in the context of different applications such as Social Network Analysis, Spam Detection, Association Rule Analysis, and Recommender Systems. Prereq: C- or higher in CSCI 3287, CSCI 3412 & MATH 3195. Restriction: Restricted to students in a computer science major or minor. Cross-listed with CSCI 5702 and CSCI 7702. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or higher in CSCI 3287, CSCI 3412 MATH 3195. Restriction: Restricted to students in a computer science major or minor.
Typically Offered: Fall.

CSCI 4738 - Senior Design I (3 Credits)
This is an advanced practical course in which students design, implement, and document and test software systems for use in industry, non-profits, government and research institutions. The course offers practical experience by working closely with project sponsors. It also offers extensive experience in oral and written communication throughout the software life cycle. Prereq: Grade of C- or higher in CSCI 3287, CSCI 3415, CSCI 3453, and CSCI 3508. Restriction: Restricted to Computer Science Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3287, CSCI 3415, CSCI 3453, and CSCI 3508. Restricted to Computer Science Majors (CSCI-BS).

CSCI 4739 - Senior Design II (3 Credits)
This course is a continuation of Senior Design I. Students must have taken Senior Design I in order to enroll for Senior Design II. In this course, the projects begun in Senior Design I are completed and presented. Prereq: CSCI 4738. Restricted to undergraduate Computer Science Majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 4738. Restricted to Computer Science Majors (CSCI-BS).

CSCI 4741 - Principles of Cybersecurity (3 Credits)
Focuses on the most common threats to cybersecurity as well as ways to prevent security breaches or information loss. Topics will include: understanding and thwarting hacker methods, authentication, cryptography, programming security, malware analysis, web, database and file server security, network and enterprise security methods. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4742 - Cybersecurity Programming and Analysis (3 Credits)
Focuses on cybersecurity related programming and analysis skills. Topics include: network and security application development, intrusion detection, automating security hardening. Students will design and develop security applications in multiple programming languages. Undergraduate algorithms and programming knowledge expected. Pre-Req: CSCI 3415. Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5742. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3415. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4743 - Cyber and Infrastructure Defense (3 Credits)
Presents analytical study of state-of-the-art attack and defense paradigms in cyber systems and infrastructures. Analysis will focus on: theoretical foundations of cybersecurity, practical development of novel technical defense techniques and analysis of alternatives. Knowledge of undergraduate-level networking. Cross-listed with CSCI 5743. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Computer Science Majors, Minors and CSSC Certificate. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restricted to Computer Science Majors, Minors and CSSC Certificate.

CSCI 4771 - Introduction to Mobile Computing (3 Credits)
Provides an in-depth understanding of the fundamentals in mobile computing and studies the existing and proposed solutions for ubiquitous computing. This course focuses on systems and networking issues involved with supporting mobility. Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5771. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4772 - Mobile and IoT Security (3 Credits)
This course concentrates on the computing of emerging mobile and IoT systems security in the Computer Science domain. The seminar will discuss recent research on computing for mobile user authentication, vulnerability risk detection of mobile/IoT systems, and software based defense mechanism. Prereq: Grade of C- or higher in CSCI 3453 and 3761. Restriction: Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5772. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4773 - Introduction to Emerging System Security (3 Credits)
This course concentrates on the security of the emerging system in the Computer Science domain. It focuses on radically novel systems, relatively fast-growing and potentially exerting a considerable impact on society, such as mobile systems, AI systems, and quantum systems. The security topics cover adversarial attacks, side/covert-channel attacks, covert-channel attacks, user authentication, biometrics, vulnerability risk detection, and defense countermeasure. Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors. Cross-listed with CSCI 5773. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors, and Cybersecurity Majors.

CSCI 4788 - Bioinformatics (3 Credits)
Provides a broad exposure to the basic concepts and methodologies of bioinformatics and their application to analyzing genomic and proteomic data. Topics may include dynamic programming algorithms, graph theoretic techniques, hidden Markov models, phylogenetic trees, RNA/protein structure prediction and microarray analysis. Cross-listed with MATH 4788, PHYS 4788. Prereq: Grade of C- or higher in CSCI 1410, CSCI 1411 and MATH 3195 or 3191. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 1410, CSCI 1411 and MATH 3195 or 3191. Restricted to Computer Science Majors and Minors.

CSCI 4800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to Computer Science Majors and Minors (CSCS-BA, CSCI-BS, CSCI-MIN, CMSC-MS)

CSCI 4810 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Credit will not count toward BSCS degree. Restriction: Restricted to BA Computer Science Majors (CSCS-BA). Repeatable. Max hours: 9 Credits. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to BA Computer Science Majors.
Typically Offered: Fall, Spring.

CSCI 4840 - Independent Study (3 Credits)
Restricted to undergraduate Computer Science Majors and Minors with senior standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restricted to undergraduate Computer Science Majors and Minors with senior standing.

CSCI 4866 - Advanced Mobile and Ubiquitous Systems (3 Credits)
This course covers various aspects of mobile and ubiquitous systems to provide an in-depth understanding of principles, state-of-the-art solutions and challenges in design and implementation of such systems. Prereq: Grade of C- or higher in CSCI 3453 and 3761. Restriction: Restricted to undergraduate Computer Science Majors and Minors. Cross-listed with CSCI 5866. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4910 - User Experience Design (3 Credits)
A how-to course for any technologist who has endured difficult interfaces and wants to design effective user interfaces that respect and advance the user experience. Course includes: Psychology, HCI personas, scenarios, prototyping, and evaluation for desktop and mobile applications. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restricted to Computer Science Majors and Minors.

CSCI 4920 - Computer Game Design and Programming (3 Credits)
Computer Game Design and Programming introduces practical and example driven approaches to modern 3D game development. Topics include 3D modeling, character animation, UI design, scripting, texture mapping, and sound effect. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3412 with a C- or higher. Restriction: Restricted to Computer Science Majors and Minors (CSCI-BS, CSCS-BA, CSCI-MIN).

CSCI 4929 - Internship (3 Credits)
Faculty and employer-supervised employment in industry. Enrollment is limited to students who fully complete a contract for cooperative education credit by the last day of the drop or add period. Prereq: CSCI 3508 and cumulative GPA of 2.75 or higher. Restricted to undergraduate students in the Bachelors of Arts in Computer Science Program (CSCS-BA). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 3508 and cumulative GPA of 2.75 or higher. Restricted to undergraduate students in the Bachelors of Arts in Computer Science Program (CSCS-BA).

CSCI 4930 - Machine Learning (3 Credits)
Provides theoretical and computational foundations in machine learning to design and develop intelligent applications to perform object recognition, personalized recommendations, improve cybersecurity, fact-checking, forecasting and finding communities based on three classes of algorithms: supervised, unsupervised, semi-supervised and reinforcement learning. Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) & CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5930. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4931 - Deep Learning (3 Credits)
Provides a foundation on deep learning; a sought-after skill in machine learning. Topics include neural network design & learning, restricted Boltzmann machine, convolution neural network, recurrent neural network, LSTMs, deep reinforcement learning, autoencoders, and evolving computation frameworks like TensorFlow, Keras. Prereq: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200) and CSCI 3412. Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5931. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: MATH 3195 (or both MATH 3191 and MATH 3200) CSCI 3412. Restricted to Computer Science Majors and Minors.

CSCI 4939 - Internship (3 Credits)
Faculty or employer-supervised employment in industry. Enrollment is limited to students who fully completed a contract for cooperative education credit by the last day of the drop or add period. Prereq: Grade of C- or higher in CSCI 3415 and cumulative GPA of 2.75 or higher. Restriction: Restricted to Computer Science Majors and Minors. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Grade of C- or higher in CSCI 3415 and cumulative GPA of 2.75 or higher. Restriction: Restricted to Computer Science Majors and Minors.

CSCI 4951 - Big Data Systems (3 Credits)
Presents a practical while in-depth review of the principles of a series of modern data processing systems (e.g., Hadoop, Spark, TensorFlow) designed to address the Big Data challenges. In combination, these systems enable the data to knowledge (Big) data lifecycle. Prereq: Grade of C- or higher in MATH 3195 (or MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restriction: Restricted to Computer Science Majors and Minors. Cross-listed with CSCI 5951. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Grade of C- or higher in MATH 3195 (or both MATH 3191 and MATH 3200), CSCI 3287 and CSCI 3412. Restricted to Computer Science Majors and Minors.

Construction Engineering and Management (CEMT)

CEMT 1000 - Introduction to Construction Management (1 Credit)
Course provides an introduction to the construction industry and project management. Student will learn basic CM terminology, roles and responsibilities associated with a construction project, and construction documents. Max hours: 1 Credits.
Grading Basis: Letter Grade

CEMT 2100 - Construction Management Fundamentals (3 Credits)
This course focuses on introducing the field of construction engineering and management. Topics will include introduction to construction management and work process; drawings; cost estimating; project planning and control; construction operations and job site management; quality and safety management; and building information modeling. Course participants will gain knowledge about construction engineering and management through lectures, exercises, class presentations, projects and group activities. Course includes a field trip to a construction site and guest speakers from the construction industry as the course time allows. Max hours: 3 Credits.
Grading Basis: Letter Grade

CEMT 2300 - Heavy Civil Construction and Equipment (3 Credits)
Course includes an introduction to heavy civil construction equipment, materials, labor and methods. Students will learn to perform comparative cost analysis for owning and operating heavy equipment; and perform the proper selection, applications, utilization and productivity of heavy equipment with the associated labor and logistics. Max hours: 3 Credits.
Grading Basis: Letter Grade

CEMT 3100 - Field Engineering and Management (3 Credits)
se includes an overview of field engineering and management. Students will assess basic design of temporary structures, quality assurance and quality control, and materials testing and processing. Students will learn the fundamentals of soils engineering. Students will be able to apply surveying concepts and generate site layout. Students will learn the basics of safety, accident prevention, risk management, and regulatory compliance on construction sites. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4067 - Construction Senior Capstone (3 Credits)
Students will work in teams to formulate or design a construction project requiring the synthesis of material learned in previous courses. The student teams will establish goals, plan and accomplish tasks, meet deadlines, analyze risk and uncertainty, and demonstrate leadership and management skills. Teams will coordinate and communicate with a range of stakeholders and give final presentations. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4231 - Construction Materials and Methods (3 Credits)
This course serves as an introduction to the primary materials and methods used to construct buildings and infrastructure across the United States, including concrete, wood and steel. Students explore processes related to specifying and installing materials, as well as analyze various material performance characteristics. Students are required to complete lectures, videos and class activities. Students also research and present information on a wide range of materials and construction processes. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4232 - Construction Planning and Control (3 Credits)
This course presents knowledge on planning and controlling of construction projects. Students will learn the basics of construction planning to develop work breakdown structure and activity list, estimate activity cost and duration, and identify job logic and precedence relationships. Several scheduling techniques will be presented in this class, including bar chart, network scheduling, uncertainty in scheduling (PERT), limited resources scheduling, resource leveling, line of balance, and time-cost tradeoff analysis. Furthermore, this class will provide knowledge on cash flow analysis and construction control techniques such as Earned Value method. Students will acquire skills on the use of currently available computer scheduling and planning software such as Primavera 6 and Navisworks Manage to create 5D models to visualize sequence of the construction activities. In addition, students will forms teams and work on a project throughout the semester to apply the skills that they learn in class. Prereq: CEMT 2100 and a statistics course (MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010) with a C- better or instructor permission; Restriction: Restricted to students with senior standing. Cross-listed with CVEN 5232. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 and a statistics course (MATH 2830, 3800, CVEN 3611, ELEC 3817, or BANA 2010) with a C- or better or instructor consent; Restriction: Restricted to students with senior standing.

CEMT 4233 - Construction Cost Estimating (3 Credits)
This course presents the application of scientific principles to rough and detailed cost estimating for construction. The course starts with an introduction to estimating and how it fits in bid/proposal process and construction management. Quantity take offs, putting costs to those quantities, overhead costs, cost markups and profits; and computerized estimating will be explored. The project includes quantity take and cost estimate for the concrete and metals portion of an actual project. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4234 - Sustainable Construction (3 Credits)
This course will serve as an introduction to major components and technologies used in sustainable design and construction to create healthy, environmentally-sensitive built environments. Content focuses on construction processes, renewable energy systems, healthy buildings, natural and cultural resources, and traditional as well as cutting-edge building techniques. Course participants will gain knowledge about effective sustainable practices through active learning by engaging in case studies, class presentations, and group activities. Numerous guest speakers will share first-hand experience regarding implementation and professional practice of sustainable principles in the real-world. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4236 - Project Management Systems (3 Credits)
Address the basic nature of managing projects and the advantages and disadvantages to this approach. Introduce the characteristics, techniques, and problems associated with initiating, planning, executing, controlling, and closeout of projects. Learn about the International Standards of PM and how to use them. Develop a management perspective about projects to help develop future project managers. Restriction: Restricted to CMGT-BS or CEMT-BS majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to CEMT or CMGT majors.

CEMT 4239 - Introduction to Temporary Structures and Construction Engineering (3 Credits)
This course will introduce the many types of temporary structures that are integral in the completion of construction projects. The temporary structures to be discussed include but are not limited to formwork, falsework, scaffolding, Support of Excavation (SOE), and equipment bridges. Construction Engineering will also be introduced including the application of structural engineering to crane picks and demolitions. The course includes planning, management and design aspects. The project includes the delivery of a formwork design that stresses the importance of constructability, cost, while providing updates throughout the project to the instructor. Cross-listed with CEMT 5239. Prereq: CEMT 2100 with a C- or better and junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 with a C- or better and junior standing or higher.

CEMT 4240 - Building Information Modeling (BIM) (3 Credits)
Building Information Modeling is an advanced approach to facility design and construction using object-oriented 3-D models. It can be integrated in the design and construction for analytical purposes, including design, visualization, quantity takeoff, cost estimating, planning, and facility management. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4242 - Construction Safety (3 Credits)
This course is a study of safety practices in the construction industry and the specific safety procedures used in safety management of a construction project. Topics include safety risks inherent in construction projects, the roles of government, the judicial system, the insurance industry, designers and project owners in safety management and the economic impact of injures. Advanced topics include safety risk quantification and analysis, design for safety and emerging technologies. Prereq: CEMT 2100 or CVEN 4230 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CEMT 2100 or CVEN 4230 with a C- or better.

CEMT 4939 - Internship (1-6 Credits)
Construction Engineering and Management Internship. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Criminal Justice (CRJU)

CRJU 1000 - Criminology and Criminal Justice: An Overview (3 Credits)
This course is designed to provide an overview of the criminal justice process and the criminal justice system in general. Concepts of crime, deviance and justice are discussed and general theories of crime causality are examined. Special emphasis is placed on the components of the criminal justice system: the police, the prosecutorial and defense functions, the judiciary and the field of corrections. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

CRJU 2000 - Professional Development in Criminal Justice (2 Credits)
In this course, students will explore, examine, and reflect on their strengths, interests, and personality assessments as they relate to the criminal justice field and professional development. Participants will conduct career-related research and develop individualized action plans designed to bridge the gap between their current skills and experiences and those desired by employers in the criminal justice field. Prereq: UNIV 1110. Restriction: Restricted to Criminal Justice majors. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: UNIV 1110 Restriction: Restricted to Criminal Justice majors

CRJU 2041 - Criminological Theory (3 Credits)
This course examines the nature and causes of crime and policies within and outside the criminal justice system to predict, prevent, and correct criminal, delinquent, and deviant behavior. It involves a critical appraisal of biological, psychological, economic, and sociological theories and frameworks that explain crime, delinquency, and deviance. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3100 - Research Methods (3 Credits)
This course teaches students how to formulate research questions related to criminology and crime and justice. It addresses how to design research in the field, including choosing an appropriate method and sampling strategy and collecting, analyzing, interpreting, and reporting data and findings. Specific substantive elements are included in research design (e.g., various types of probability and non-probability sampling; strengths and weaknesses of surveys, interviews, and other methodological approaches; experimental and non-experimental designs; qualitative techniques; etc.) Other substantive topics are addressed, including research ethics, consuming research, and writing in different settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3150 - Statistics for Criminal Justice (3 Credits)
This course introduces descriptive and inferential statistics and the use of computer software to analyze criminal justice data. Course content includes hypothesis testing and the basic analysis of continuous and discrete dependent variables related to criminology and criminal justice. Prereq: CRJU 3100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 3100

CRJU 3160 - White-Collar Crime (3 Credits)
Employs social science and legal approaches to examine crime committed by corporations as well as by individuals in white-collar occupations. Topics include how such crimes are socially defined, who commits them, which social contexts promote them, who is victimized, and how society and the criminal justice system respond. Cross-listed with CRJU 5574. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3220 - Community Corrections (3 Credits)
This course focuses on innovative community-based strategies for dealing with criminal offenders. Correctional alternatives to imprisonment discussed in this course include probation and parole and various community programs, such as day reporting centers, electronic monitoring, half-way houses, and boot camp programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3250 - Violence in Society (3 Credits)
This course examines various aspects of violence, including distribution over time and space; situations and circumstances associated with violent victimization and offending; and how social institutions, community structure, and cultural factors shape violent events. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3251 - Crime and the Media (3 Credits)
This course surveys the relationships between mass media, crime, offenders, victims, and criminal justice. It explores how the criminal justice system and its agents, accused and convicted offenders, and victims, are portrayed in the media and the influence of these depictions on society, public policy, and the criminal justice system. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3252 - Violent Offenders (3 Credits)
This course consists of a historical overview of violence in American society. Course content includes an examination of violent crime rates over time, societal explanations for changes in rates and an examination of the theoretical causes and preventative strategies for acts of violence. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3270 - Case Studies in Criminal Justice (3 Credits)
This seminar examines the lives of people who live on the margins of a society that perceives them as outsiders. Ethnographic studies that utilize observation, participant observations, and interviews as their primary research methodology are assigned in order to develop a critical understanding of the social marginalization and cultural aspects of the lives of real human beings living constantly on the edge of the law. Cross-listed with CRJU 5270. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3280 - Trauma Among Correctional Populations (3 Credits)
This course provides a comprehensive overview of trauma and the relationship of trauma to criminal offending. Topics includes the definition of trauma, the impact of trauma on development, lifelong consequences of chronic exposure to adverse events, and how to integrate knowledge about trauma into organizational policies in correctional settings. The class focuses on understanding the components of a trauma-responsive environment in correctional settings and incorporating trauma recovery principles into practice. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3285 - Trauma in the Criminal Justice System (3 Credits)
This course examines trauma as widely prevalent among those who are served by the criminal justice system and experienced disproportionately among criminal justice professionals. Trauma prevalence, theory, prevention, and interventions through a trauma stewardship lens for victims of multiple forms of trauma, including vicarious traumatization and secondary traumatic stress, will be emphasized through an all-inclusive view across the criminal justice continuum. Cross-listed with CRJU 5285. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3290 - Capital Punishment (3 Credits)
This course examines in-depth a comprehensive range of issues surrounding capital punishment. Specifically, it looks at the history of capital punishment, methods of execution, legal issues and case law, deterrence, miscarriages of justice, discrimination in the capital charging and sentencing system, and the role of the death penalty internationally. The coverage of these issues relies on many sources, including scholarly readings, non-fiction books, court cases, websites, videos and documentaries, speeches, and media. Cross-listed with CRJU 5290. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3310 - Contemporary Issues in Law Enforcement (3 Credits)
This course examines law enforcement's role in contemporary society and the impact of police interaction on other segments of the criminal justice system. Special attention is paid to controversies related to police training and education, career development and community relations. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3320 - Police-Community Relations (3 Credits)
This course focuses on the police and community response to crime. Course content includes an overview of the major concepts and issues involved in what many consider to be a major fundamental shift in the approach and operations of modern policing. The origins, meaning, development and experiences of community policing and various assessments of the advantages and disadvantages of community policing are emphasized. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3330 - Serial Killers (3 Credits)
This course looks at various aspects of serial killing, including definitions, statistics, and demographics of serial killers and their victims. It examines factors that are correlated with serial killing, as well as criminal justice responses to serial killers (e.g., investigative techniques, prosecuting and defending accused killers, etc.) It also includes cases of serial killers. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3340 - Cybercrime (3 Credits)
This course introduces the history and evolution of cybercrime. It explores different types of cybercrime and the issues they present socially, for national security, and in the context of the criminal justice system. Specifically, with respect to the criminal justice system, the class focuses on how cybercrime is defined in laws, prevented, investigated, prosecuted, and sentenced. It also looks at how cybercrime impacts victims and society as a whole. Ethics and policy implications at each stage of the criminal justice process and outside of the justice system are analyzed. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

CRJU 3410 - Probation and Parole (3 Credits)
This course is appropriate for students who have a specific interest in the role of probation and parole as correctional sanctions in community settings. Substantive topics, including the presentence investigation report, privatization, and the roles and responsibilities of probation and parole officers, are discussed. Particular attention is paid to research on the effectiveness of probation and parole, factors that contribute to the successful completion of probation and parole, and the role that the community and citizens play in these community corrections processes. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3420 - Pleas, Trials and Sentences (3 Credits)
This course analyzes case materials involving pleas, trials, and sentences. Course content includes the dimensions of criminality, the specific elements of major crimes, plea bargaining, the use of confessions, fair trial procedures, and various aspects of criminal sanctions, including cruel and unusual punishments. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3510 - Drugs, Alcohol, and Crime (3 Credits)
This course looks at the socially constructed nature of drugs and drug policy. It explores the connection between drugs and crime within the socio-historical context of contemporary U.S. drug policy. Special emphasis is placed on the relationship between drugs and alcohol abuse and criminal offending, including the criminal justice system responses to possessing, distributing, and using illegal substances. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3520 - Juvenile Justice (3 Credits)
This course examines the development, change, and operation of the American juvenile justice system and the social factors that shape the identification and treatment of juvenile offenders. Special emphasis is placed on juvenile law and methods of dealing with youthful offenders. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3530 - Juvenile Delinquency (3 Credits)
This course looks at deviant and delinquent behavior committed by minors in American society. It explores the social construction of juvenile delinquency and factors and conditions contributing to at-risk and delinquent behavior. Finally, it examines the control and treatment of juvenile offenders prevention programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3540 - Crime and Delinquency Prevention (3 Credits)
This course provides students with an overview of issues related to crime and delinquency prevention, both from criminological and criminal justice points of view. Crime prevention programs that encompass both the individual and community levels are examined. Responses to juvenile offenders-ranging from prevention and diversion to institutional corrections and after care are explored in context of youth policy generally. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 3575 - Offenders With Mental Health Disorders (3 Credits)
Examines the offender who may be mentally disordered. Special attention is paid to the various phases of the criminal justice system where psychiatrists are involved (e.g., diversion, fitness, insanity and sentencing), dangerous sex offender legislation, "not guilty by reason of insanity" and "guilty but mentally ill" statutes, and issues concerning confidentiality, informed consent, and treatment. Cross-listed with CRJU 7575 and 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4010 - Public Service in Emergency Management and Homeland Security (3 Credits)
Introduces emergency management and homeland security including: management of hazards, emergencies, disasters, and the networks of government and nonprofit organizations providing services. Focuses on principles of emergency management and homeland security at state and local jurisdictional levels. Cross-listed with PUAD 4010, PUAD 5650, and CRJU 5650. Prereq: CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4012 - Principles of Emergency Management (3 Credits)
Introduces the discipline and practice of emergency management. Topics include administrative practice and processes by which public policy shapes governmental responses to hazards, emergencies, and disasters. Cross-listed with CRJU 5655, PUAD 4012, and PUAD 5655. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4014 - Federal Wildlife and Fisheries Investigations (3 Credits)
Students will learn about federal wildlife laws and an overview of each law will be provided, along with methods and tools used to investigate possible violations of the laws. Prosecuting cases will be covered, and actual cases will be reviewed so students are able to see practical application of the law. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

CRJU 4015 - Intelligence Writing and Briefing (3 Credits)
This course provides an overview of intelligence analysis and aims to provide the skills and tools necessary to effectively communicate results to consumers. Students will be familiarized with the analytical, perceptual, and cognitive pitfalls of conducting intelligence analysis and learn a variety of strategies for overcoming these problems, preparing professional intelligence products, and presenting executive-level intelligence briefings. Cross-listed with CRJU 5015. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4042 - Corrections (3 Credits)
This course consists of an overview of the field of penology and corrections. Attention is paid to conflicting philosophies of punishment, criminological theory as it applies to the field of corrections, the selectivity of the process through which offenders move prior to their involvement in correctional programs, institutional corrections, alternative correctional placements, and empirical assessments of the short and long-term consequences of one's involvement in correctional programs. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4043 - Law Enforcement (3 Credits)
This course presents an overview of the role of police in the United States. Attention is placed on the origins of policing, the nature of police organizations and police work, patterns of relations between the police and the public, discretion, and the police role in a sociological context. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4044 - Courts and Judicial Process (3 Credits)
This course examines the basic functions, structure, and organization of the federal and state court systems, with special attention on the criminal court system. It looks at the courtroom workgroup and agents within it, including the prosecutor, defense attorney, and judge. It focuses on the influence of judicial behavior on the court process by examining judges' policy preferences, legal considerations, group processes within courts, and courts' political and social environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4100 - Administration of Criminal Justice (3 Credits)
Analyzes the policies and practices of agencies involved in the criminal justice process, from the detection of crime and arrest of suspects through prosecution, adjudication, sentencing and imprisonment, to release. The patterns of decisions and practices are reviewed in the context of a systems approach. Cross-listed with CRJU 5100. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4120 - Race, Class, and Justice (3 Credits)
This course examines the relationships between race, social class, and crime. Attention is given to theoretical explanations, empirical research, and patterns of criminal behavior. The class focuses on historical frameworks that are relevant to current perspectives on the impact and interactions of race, class, and crime in the field. It examines race, class, and race-by-class disparities and discriminatory practices at different phases of the justice system from detainment through sentencing and appeals. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4121 - Ethics in Criminal Justice (3 Credits)
This course is designed to prepare students to identify and critically examine ethical issues in the criminal justice system by applying ethical decision models. It also provides students with the opportunity to analyze how they would resolve these issues according to their own values and beliefs while staying within the boundaries of the law and formal and informal professional ethics. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4130 - Poverty, Crime, and Justice (3 Credits)
This course analyzes theories and empirical research related to the causes of criminal behavior committed by individuals of lower socio-economic status. Further, it examines the economic and social costs of crimes committed by under-resourced individuals and crime-prevention strategies that are connected to crimes committed by under-resourced individuals. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4140 - Interpersonal Violence (3 Credits)
This course examines the criminal justice systems response to intimate partner violence by focusing on the interactions between victims, offenders, and components of the criminal justice system. By exploring the dynamics of intimate partner violence, this course addresses the theories, history, research, legislation, and policy implications related to the criminal justice system's response to intimate partner violence. Cross-listed with CRJU 5150. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4150 - Sex Offenders and Offenses (3 Credits)
This course explores historical and current practices of the criminal justice system to address sex offenders and offenses. Topics include the history of sexual abuse, etiology of offenders, victims' issues, juvenile sex offenders, risk assessment, and treatment/supervision approaches to sex offenders and offenses. Prereq: CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4170 - Victimology (3 Credits)
This course involves the scientific study of crime victims and focuses on the physical, emotional, and financial harm people suffer at the hands of offenders. Emphasis is placed on victim-offender relationships, interactions between victims and the criminal justice system, and connections between victims and other social groups and institutions. Theories, history, research, legislation, and policy implications related to the social construction of "the victim" are explored. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4171 - Homicide Studies (3 Credits)
This class examines criminal homicide from all angles: the offenders, the victims, the police, prosecution, defense, jurors, and judges. It looks at investigative techniques and the latest science involved in criminal investigation, jury selection, and other criminal justice system issues. It focuses on what is arguably the most serious form of homicide, murder, exploring sensational cases that involve delving into the psyche of murderers. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4172 - Crime Forensics (3 Credits)
This course offers an overview of specialized knowledge, techniques, principles, and technologies of forensic sciences and criminal investigations. Students will explore the fundamentals of proper evidence collection, preservation, and evidence analysis techniques. Students in this course will develop an understanding of the practical application of forensic science to legal issues and disputes. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4173 - Crime Scene Investigation (3 Credits)
Crime Scene Investigation is a course that is designed to give the student a working knowledge of how to investigate and collect evidence on a variety of crime scenes. It demonstrates how different types of physical evidence is used to solve crimes, specifically looking at forms of evidence like gun shots, blood spatter, and finger-printing. It also looks at the importance of professional skills, such as academic knowledge, problem-solving, effective communication, and the use of technology. Other issues, such as historical context and ethics, will be discussed. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4180 - Comparative Study of Criminal Justice Systems (3 Credits)
This course analyzes the dynamics of criminality and the social responses to crime across countries. Special emphasis is placed on methods of comparative legal analysis utilized to examine international differences in crime and justice, international cooperation in criminal justice, and crime and development. Prereq: CRJU 1001. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4190 - Gender and Crime (3 Credits)
This course explores issues surrounding women as offenders and victims. It investigates explanations for women's involvement in illegal activities and looks at gender-based disparities and discrimination in the criminal justice system's treatment of women who are accused and convicted of crimes. The class also examines women's participation in criminal justice professions, including law enforcement, corrections, judicial processes, and law. Cross-listed with CRJU 5553. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4200 - Wrongful Convictions (3 Credits)
Explores the continuum of justice-system errors ranging from persons who are falsely accused (arrested, prosecuted, and tried) to those who are wrongly convicted and imprisoned or sentenced to death row and erroneously executed. Cross-listed with CRJU 5200. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4210 - Prisoner Reentry (3 Credits)
Focuses on prisoner reentry, including strategies to prepare inmates for release, reduce recidivism, and facilitate adjustment in the community while meeting the demands of public safety. Cross-listed with CRJU 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4230 - Treatment Approaches in American Corrections (3 Credits)
This course examines the origins and historical development of prisons and jails in America. Particular attention is given to the impact of reform movements; the rise of centralized correctional systems; and regional and other socially differentiated variations in the practice of punishment. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4252 - Criminal Offenders: Evidence-Based Decision-Making (3 Credits)
This course will introduce the core principles of evidence based programming and tools of motivational interviewing as it is used currently with the offender population. In addition, students will learn how to utilize these skills working with specific offender populations. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4310 - Leadership Roles in Criminal Justice (3 Credits)
The course is designed to enhance interest, experience, and knowledge in leadership that promotes professionalism and ethical behavior among criminal justice professionals. Individual and organizational dynamics are explored through a critical perspective, focusing on criminal justice roles and responsibilities. The class teaches effective leadership skills in areas such as team building, strategic planning, and decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4331 - Crime Analysis and GIS (3 Credits)
Serves as an introduction to the uses and applications of analysis within law enforcement, including the role of analysis in law enforcement, theories that guide analysis and police practices, commonly used data sources and technology, and techniques for various types of analysis utilized in law enforcement. Cross-listed with CRJU 5331. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4410 - Criminal Law and Constitutional Procedures (3 Credits)
This course focuses on substantive criminal law and constitutional rights of the accused in criminal proceedings. Course content includes the legal elements of major crimes. It also addresses legal aspects of investigation, search and seizure, arrest, custodial interrogation, the appointment of counsel, and constitutional rights that apply during trials (e.g., right to confront witnesses, be protected against self-incrimination, be tried by a jury of one's peers, etc.) Rules governing the admissibility of evidence in court are also examined. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4430 - Law and Society (3 Credits)
This course introduces students to the scholarly study of law. Students will become familiar with social scientific perspectives of the law, legal institutions, the legal process, and the impact of law on behavior. Particular emphasis is placed on the interplay between the social construction of crime through law, criminal behavior and individuals targeted in criminal justice processes in America. Additional topics include theories of law and legality, comparative legal systems, police, lawyers, judges, juries, and the use of social science expertise in the justice system. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4440 - Courts and Social Policy (3 Credits)
This course involves the study of emerging trends and issues in the administration of the courts, the emerging role of the judiciary in the administration of programs in the public and private sectors, and the implications of court administration on social policy. Course content includes the history of the judicial approaches to the criminal justice administrative process and substantive social policy. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4450 - Homeland Security (3 Credits)
This course is an in-depth analysis of homeland security in the U.S. Topics include the initial concepts and strategies of securing land borders, seaports, and airports, the establishment of the Department of Homeland Security, and the functions and operations of the DHS today and in the future. Prereq: Completion of CRJU 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: CRJU 1000

CRJU 4520 - Gangs and Criminal Organizations (3 Credits)
This course traces the origins and historical development of the activities known as "organized crime." These crimes are some of the most dangerous to American society and range from the commonly known offenses of gambling and narcotics to the more subtle and sophisticated, less understood but equally serious, crimes of extortion, commercial bribery, and political corruption. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4530 - Families and Intergenerational Violence (3 Credits)
This course focuses on the family as the primary institutional mechanism of social control. Structured around social learning theory, it explores the relationships between exposure to childhood violence and violence later in life, including dating relationships during adolescence and adulthood and violence in marital relationships. The course also looks at the impact of childhood violent victimization on juvenile delinquency, adult criminality, and violent behavior in general. Max hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4540 - Evidence-Based Approaches in Law Enforcement (3 Credits)
This course provides an introduction to the uses and applications of analysis within law enforcement, including the role of analysis in law enforcement, theories that guide analysis and police practices, commonly used data sources, technology, and a practical introduction to the techniques for various types of analysis utilized in law enforcement. Prereq: CRJU 1000, 3100, and 4043. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: CRJU 1000, 3100, and 4043.

CRJU 4600 - Special Topics in Criminology and Criminal Justice (1-6 Credits)
This highly specialized seminar addresses cutting-edge and emerging developments in the fields of criminology and criminal justice and provides students and faculty with the opportunity to explore significant themes, issues, and problems from a broad interdisciplinary perspective. Topics vary from semester to semester. Prereq: CRJU 1000. Repeatable. Max hours: 18 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 18.
Pre: CRJU 1000

CRJU 4700 - Community-Based Field Experience and Seminar (3 Credits)
Students work in small groups to complete substantive projects for government agencies and community organizations, led by faculty instructor. Topics addressed will vary depending on the needs of the community partner. Prereq: Completion of CRJU 1000 and CRJU 3100. Restriction: Restricted to SPA students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: Completion of CRJU 1000 and CRJU 3100. Restriction: Restricted to SPA students.

CRJU 4710 - Environmental Crime and Justice (3 Credits)
Environmental Crime and Justice will look at the disproportionate benefits and burdens of environmental "profits" (e.g., open spaces, clean air and water, etc.) and contamination (which results from behaviors that include, but are not limited to crime), as well as the implications of these disparities on certain areas, particularly communities of color and indigenous communities. The role of the government, the private sector, non-profit organizations, and the environmental justice movement in creating, perpetuating, and minimizing environmental crime and its disparities will be examined, with part of the focus being on theories within critical criminology that address issues of environmental crime injustices. The nature of environmental offenders and victims will be explored. Policies and programs that have been organized to address environmental crime and other injustices and their effects (e.g., quality of life, birth defects, childhood asthma, lead poisoning, cancer, etc.) will be reviewed, including responses by the criminal justice system to environmental crime. Students will examine critically the consistencies and inconsistencies in institutionalized mechanisms that are set up, either intentionally or more subtly, to create, reinforce, or minimize environmental crimes and injustices. Cross-listed with CRJU 5710. Max Hours: 3 Credits.
Grading Basis: Letter Grade

CRJU 4840 - Independent Study: CRJU (1-6 Credits)
This course consists of instructor-guided research in an area of mutual interest to the student and instructor or a student-driven project supervised by the instructor. Students are responsible for selecting their area of inquiry prior to contacting the instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CRJU 4939 - Internship (1-9 Credits)
Internships involve a career-related supervised experiential course in a criminal justice or related agency. Permission to enroll must be preceded by an application for an internship. Prereq: Permission of instructor and advisor is required for undergraduate students. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CRJU 4961 - Capstone (1-10 Credits)
Synthesizes competencies gained throughout the course of study into a client-based research project. Students conduct independent research, complete a final project demonstrating their qualifications and expertise. Restriction: Restricted to undergraduate students in the School of Public Affairs. Max hours: 10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Restriction: Restricted to undergraduate students in the School of Public Affairs.
Additional Information: Report as Full Time.

CRJU 4995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with CRJU 5995. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall.

Culturally and Linguistically Diverse Education (CLDE)

CLDE 1000 - Language, Identity, & Power: International Perspectives (3 Credits)
This course explores the relationship between language, identity, and power in various international contexts. The course considers how legacies of inequality for particular communities are reflected in societal attitudes about languages and language users and subsequent language planning. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

CLDE 1030 - Introduction Language Development of Multilingual Learners (3 Credits)
This course provides an overview of how languages are learned and used in day-to-day life. It focuses on the complexities and variations in registers, dialects and languages as an essential part of human communication in the context of power and privilege in the larger society. Max hours: 3 Credits.
Grading Basis: Letter Grade

CLDE 2000 - CLDE Foundations (3 Credits)
This CLDE foundations course includes an overview of history and legislation related to bilingual education and second language education, and provides an overview of essential linguistics for educators and bilingual language development and assessment. Max hours: 3 Credits.
Grading Basis: Letter Grade

CLDE 3680 - Spanish for Educators (3 Credits)
This course is designed to help teacher candidates advance their Spanish skills. Teacher candidates will clarify their motivations and purposes for studying Spanish and gain a greater understanding of language assessments and of their own Spanish abilities and increase insight and empathy for emergent bilingual students. Cross-listed with CLDE 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade

CLDE 3830 - Culturally and Linguistically Responsive Teaching through STEM (3 Credits)
In this course, you will develop your ability to plan for the opportunities and challenges for language development during science and math learning in preK-12 education settings. In doing so, you will develop linguistically responsive teaching practices for all subjects. Prereq or coreq: EDHD 3930 and SPED 4030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 3930 and SPED 4030

CLDE 3840 - Independent Study in CLDE (1-6 Credits)
Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

CLDE 4020 - Responsive Classroom Communities (3 Credits)
This course investigates how people learn and the implications of social and cultural learning for establishing engaging and culturally responsive learning communities. Through this course teacher candidates will better understand their roles in student learning and how their own cultural lenses impact their relationships with students and families, and influence student success in the classroom. Cross-listed with CLDE 5020. Prereq: EDFN 4010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: EDFN 4010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students.

CLDE 4700 - Social Studies for Multilingual Learners (3 Credits)
Participants will use a social justice lens to investigate the content and language demands of the four disciplines of social studies: History, Civics, Geography and Economics. This class focuses on Social Studies methods as well as essential practices for teaching multilingual students. Restriction: Restricted to students in Education and Human Development with between 40 and 180 cumulative credit hours. Cross-listed with CLDE 5700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 40 and 180 cumulative credit hours.

CLDE 4800 - Language Development and Acquisition (1-5 Credits)
This academy provides a basic introduction to bilingual and English as a second language education programs. The content consists of introductory material regarding second language acquisition theories and stages, factors that influence learning a second language in schools and informal assessment among other. Repeatable. Max Hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.

CLDE 4810 - Orientation to Bilingual Education (1 Credit)
This academy provides a basic introduction to bilingual education programs. The content consists of introductory material regarding the legal and historical foundations of bilingual education, bilingual and ESL program model overviews, materials to address cultural issues in the classroom, and introductory information regarding human growth and development. Max hours: 1 Credit.
Grading Basis: Letter Grade

CLDE 4830 - Instructional Delivery Methods for Second Language Learners (1 Credit)
This academy provides more in-depth information on different instructional methods and how to apply them in working with English language learners. It looks into practical strategies for modifying lessons using sheltered instruction in order to accommodate the students' linguistic and academic needs (dominance vs. proficiency). Max hours: 1 Credit.
Grading Basis: Letter Grade

CLDE 4835 - Special Topics: Culturally and Linguistically Diverse Education (1-3 Credits)
Advanced study of special topics that examine multilingualism, cultural pluralism, and community in Culturally and Linguistically Diverse Education. Repeatable. Max hours: 9 credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

CLDE 4910 - CO-TOP Practicum (1-2 Credits)
The CO-TOP Paraeducator Certification requires 2 credit hours of field experience, each credit hour representing at least 90 hours in the field. Field experiences should balance out a person's previous experience to create a more marketable set of skills and a range of skills across ages, disabilities, grade levels and types of programs or philosophical bases. Each practicum participant is provided a practicum handbook. The handbook outlines all components of the practicum experience. The handbook is made available to each participant at the time of registration for the experience. Prereq: students need to have taken at least 10 CO-TOP academies before they are eligible to take the practicum course. Max hours: 2 Credits.
Grading Basis: Letter Grade

Cybersecurity (CSCY)

CSCY 2930 - Practical System Administration (2 Credits)
Introduces students to essential system administration topics including, but not limited to, IT design and configuration methodologies, desktop support, building and configuring production level servers, network technologies and troubleshooting, security, virtualization, storage, and server operating systems. Prereq: CSCI 1410 or an equivalent introductory computer programming course. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: CSCI 1410
Typically Offered: Spring.

CSCY 3740 - Computer Security (3 Credits)
Introduces basic knowledge from the computer security area. Topics covered in this course include: Cybersecurity Ethics, Penetration Testing, Secure Programming Practices, and Life-Cycle Security. Students will gain the understanding of ethics in cybersecurity with the tools for ethical decision making, learn methods of exploiting vulnerabilities and perform penetration testing on a simple network, understand the characteristics of secure programming with the ability to implement programs that are free from vulnerabilities, and understand security related concerns in a system Life-Cycle and how security principles can be applies to improve security throughout a system. Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 2421. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Spring.

CSCY 3765 - Secure Network and Systems Programming (3 Credits)
This course provides a deep understanding of operating system and TCP/IP networking architecture, and the low-level interfaces that are required to build secure system-level, multithreaded, and network applications, including file and process operations, inter-process communications, creating and implementing networking protocols and sockets-based programming. Students will learn how to design secure applications, write secure code that can withstand attacks, and conduct security testing and auditing and apply it to real world problems. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall.

CSCY 3800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall, Spring.

CSCY 3840 - Independent Study (3 Credits)
Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall, Spring, Summer.

CSCY 4407 - Security and Cryptography (3 Credits)
A broad overview of cryptography and its relation to computer security. Topics include basic standard cryptographic techniques, a history of codes and ciphers, RSA, DES, AES, Elliptic Curve Cryptography, ElGammal, and applications to current and future technologies. Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3412. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Spring.

CSCY 4738 - Senior Design I (3 Credits)
This is an advanced practical course in which students design, implement, and document and test secure software systems for use in industry, non-profits, government and research institutions. The course offers practical experience by working closely with project sponsors. It also offers extensive experience in oral and written communication throughout the software life cycle. Prereq: Grade of C- or higher in CSCI 3453, CSCY 4741, CSCY 4742 and CSCY 4743. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453, CSCY 4741, CSCY 4742 and CSCY 4743. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall.

CSCY 4739 - Senior Design II (3 Credits)
This course is a continuation of Senior Design I. Students must have taken Senior Design I in order to enroll for Senior Design II. In this course, the projects begun in Senior Design I are completed and presented. Prereq: Grade of C- or higher in CSCY 4738. Restriction: Restricted to Cybersecurity majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCY 4738. Restriction: Restricted to Cybersecurity majors (CSCY-BS).
Typically Offered: Spring.

CSCY 4741 - Principles of Cybersecurity (3 Credits)
Focuses on the most common threats to cybersecurity as well as ways to prevent security breaches or information loss. Topics will include: understanding and thwarting hacker methods, authentication, cryptography, programming security, malware analysis, web, database and file server security, network and enterprise security methods. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall.

CSCY 4742 - Cybersecurity Programming and Analysis (3 Credits)
Focuses on cybersecurity related programming and analysis skills. Topics include: network and security application development, intrusion detection, automating security hardening. Students will design and develop security applications in multiple programming languages. Undergraduate algorithms and programming knowledge expected. Prereq: Grade of C- or higher in CSCY 3740 and CSCY 3765. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCY 3740 and CSCY 3765. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Spring.

CSCY 4743 - Cyber and Infrastructure Defense (3 Credits)
Presents analytical study of state-of-the-art attack and defense paradigms in cyber systems and infrastructures. Analysis will focus on: theoretical foundations of cybersecurity, practical development of novel technical defense techniques and analysis of alternatives. Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Spring.

CSCY 4772 - Mobile and IoT Security (3 Credits)
This course concentrates on the computing of emerging mobile and IoT systems security in the Computer Science domain. The seminar will discuss recent research on computing for mobile user authentication, vulnerability risk detection of mobile/IoT systems, and software based defense mechanism. Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in CSCI 3453 and CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall.

CSCY 4800 - Special Topics (3 Credits)
Credit and subject matter to be arranged. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Fall, Spring, Summer.

CSCY 4950 - Cybersecurity Risk Analysis and Management (3 Credits)
The course will cover the technical components of risk assessment and management, applying knowledge in networking, design, programming, and systems to analyze and assess vulnerabilities of infrastructures and enterprise networks. Prereq: Grade of C- or higher in the following courses: CSCY 3740 and CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or higher in the following courses: CSCY 3740 and CSCI 3761. Restriction: Restricted to Cybersecurity Majors (CSCY-BS).
Typically Offered: Spring.

Decision Sciences For Business (DSCI)

DSCI 3780 - Supply Chain Management (3 Credits)
Over the last decade businesses have started to understand how the design and operation of their supplier network can be a source of competitive advantage. Supply chain management is concerned with the activities around communication, managing inventory, warehousing, transportation and facility location. The course objectives are to understand a supply chain/network from the strategic, planning and operations perspectives and to develop skills that allow you to analyze the responsiveness and effectiveness of the network. Prereq: DSCI 2010. Max hours: 3 Credits.
Grading Basis: Letter Grade

Digital Animation (DACD)

DACD 2810 - DAC: Modeling 1 (3 Credits)
A lecture/lab course focused on the mastery of creating surface models for digital 3D content. Students will develop skills/knowledge about the processes and techniques for building complex 3D objects with an emphasis on artistic excellence through application of current 3D technologies. Prereq: FINE 1810, FINE 1820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820 Restriction: Restricted to FINE-BFA with ANI sub-plan majors within the College of Arts and Media

DACD 2820 - DAC: Surfacing and Lighting 1 (3 Credits)
A Lecture/Lab course focused on the fundamentals of lighting and surfacing in a digital 3D environment. Students will develop skills and knowledge about the processes and techniques involved in creating realistic and/or narratively powerful materials and lighting for 3D animated films. Prereq: FINE 1810, FINE 1820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820 Restriction: Restricted to FINE-BFA with ANI sub-plan majors within the College of Arts and Media

DACD 2830 - DAC: Surfacing and Lighting 2 (3 Credits)
A Lecture/Lab course exploring advanced topics in the areas of surfacing, material design, lighting, and post-production. Students will further develop skills and knowledge learned in Surfacing and Lighting I. Emphasis will be placed on collaborative workflows for lighting and material design. Prereq: DACD 2810, DACD 2820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2810, DACD 2820, and acceptance into DAC (FINE_BFA ANI)

DACD 2850 - DAC: Modeling 2 (3 Credits)
A lecture/lab course focused on mastery of skills for creating organic digital 3D models. Students will develop skills/knowledge to shape, mold, transform/articulate, and deform digital 3D shapes. Focus will be on creating digital models, with an emphasis on artistic excellence through application of current 3D technologies. Prereq: DACD 2810, DACD 2820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2810, DACD 2820, and acceptance into DAC (FINE_BFA ANI)

DACD 3810 - DAC: Production Practices (3 Credits)
This is a lecture/lab course focused on the creation and implementation of collaborative workflows for CG filmmaking. Students will learn about 3D production pipelines and how they can be used to effectively and efficiently collaborate on large-scale projects. Prereq: DACD 2830 or DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830 or DACD 2850, Acceptance into DAC.

DACD 3820 - Animation 1: Introduction to Animation and Rigging (3 Credits)
A studio course focused on foundational skills for animating digital 3D objects/characters. Students explore the process/techniques of key frame/pose-to-pose animating considering character performance, thought, constraints and velocity with an emphasis on artistic excellence through applications of current 3D technologies. Prereq: FINE 1810 and FINE 1820 and acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 and FINE 1820, and acceptance into DAC (FINE-BFA ANI)

DACD 3821 - DAC: VFX Rigging & Animation I (3 Credits)
A studio course focused on foundational skills for animating and rigging full digital 3D characters. Students explore the process/techniques of rigging for motion capture characters and adjusting their performance with consideration for thought, and animation with an emphasis on realistic VFX driven character performance. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE-BFA ANI)

DACD 3830 - Advanced Character Animation (3 Credits)
A studio course focused on mastery of skills for rigging and animating digital 3D characters. Students explore the processes/techniques of animation rigging and its relationship to animating character performances. Prereq: DACD 3820, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI)

DACD 3831 - Character FX (3 Credits)
A studio course focused on mastery of skills for rigging and animating digital 3D characters and objects and advance motion capture techniques. Students explore the processes/techniques of animation rigging and its relationship to realistic simulation of dynamic objects. Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3820 and acceptance into DAC (FINE-BFA ANI)

DACD 3835 - DAC: Visual Effects (3 Credits)
A lecture/lab course exploring the theory/techniques of creating visual effects sequences. Students explore how to develop complete effects shots, including shooting live plates, camera tracking, visual effects, and compositing, with an emphasis on artistic excellence through application of current 3D technologies. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE-BFA ANI)

DACD 3846 - Production I (3 Credits)
The first in a three-semester capstone experience focusing on the DAC-BFA thesis short. Students assemble a team, organize/develop production management tools, story animatic, and begin work on a high-production-value short or experience through an academic simulation of a real-world studio pipeline. Prereq: DACD 2830, DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830, DACD 2850, and acceptance into DAC (FINE_BFA ANI)

DACD 4810 - Production II (3 Credits)
The second in a three-semester capstone experience focusing on the production/post-production of the BFA thesis short. With teams formed and production plans set and initiated in DACD 3846: Production I, the student team completes its high-production-value animated short or experience. Prereq: DACD 3845 or DACD 3846, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 3845 or DACD 3846, and acceptance into DAC (FINE_BFA ANI)

DACD 4820 - Production III (3 Credits)
The final semester of the DAC capstone experience focusing on finalizing their DAC-Senior-Short, preparing the student to enter the professional-world/graduate school, confirming their BFA Thesis presenting their body of work, website, demo-reel, and professional personal branding/resumes and becoming skilled at cover letters. Prereq: DACD 3845 or DACD 3846, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Prereq: DACD 3845 or DACD 3846, and acceptance into DAC (FINE_BFA ANI)

Early Childhood Education (ECED)

ECED 1202 - Child Guidance and Classroom Community (3 Credits)
This course presents evidence-based classroom strategies to promote social competence, build classroom community and reduce or prevent behavior problems. Emphasis is placed on understanding child development and observing behavior to make decisions for children ages birth through age 8. Cross-listed with ECED 4202. Typically offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ECED 2000 - Early Childhood Education as a Profession (3 Credits)
This course provides an overview of the ECE profession and it's philosophical and historical foundations. Trends in early childhood care and education and professionalism are examined. Topics include developmental domains and appropriate practices, curriculum models, guidance strategies, family and community relationships, diversity and inclusion, and leadership skills to support quality early care and education work settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 2930 - Infant & Toddler Field Experience & Seminar (3 Credits)
ECED 2930 is designed to support teacher candidates in making theory-to-practice connections, focused on understanding infant and toddler development. Students will spend one day per week in an infant-toddler classroom and engage in a weekly seminar to mediate learning. Prereq or coreq: ECED 4070. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECED 4070. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

ECED 4010 - Inquiry and the Disciplines (3 Credits)
This course introduces students to the role, value and practices of inquiry in early childhood education and explores the integration of the visual arts and creative expression with the disciplines of mathematics, literacy, science, social studies, as well as young children's approaches to learning. Restriction: Professional Year Admission required for licensure students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required for licensure students. EDHD-BA-ECO or ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4020 - Science for P-2 Classrooms (3 Credits)
Focuses on teaching science in preschool, kindergarten and primary grades, including knowledge of state and district science content standards, process standards, assessment, effective instructional strategies, evidence-based practice for adapting the curriculum for diverse learners, and appropriate use of materials. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4030 - Nutrition, Health, and Safety (3 Credits)
This course focuses on nutrition, health, and safety as a key factor for optimal growth and development of young children. Content includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate classroom activities and communication with families. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4040 - Administrative Seminar (3 Credits)
Emphasizes topics required of administrators to effectively lead and manage early childhood inclusive classrooms or other related programs including leadership capacity, professionalism, administration, teaming/collaboration, communities of practice, staff management, safety, and professional development. Cross-listed with ECED 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4050 - Early Childhood Education Capstone: Planning, Instruction & Assessment (3 Credits)
This is the second course in this two-course sequence where students examine the essential features of instructional and curriculum design of developmentally appropriate and culturally sustaining inquiry based learning experiences, implementation, and assessment in the teaching and learning of young children. Prereq: ECED 4010. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECED 4010. Restriction: Professional Year Admission Required. ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4060 - Working with Families, Professionals, and Communities (3 Credits)
The focus of this course is on the human relations component of an early childhood professional's responsibilities. Course content includes family-centered practice, culturally-responsive practices, home-school partnerships, staff development and communication, collaborative teaming and community interaction. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4070 - Development and Education of Infant and Toddlers (3 Credits)
Focuses on the growth and development of infants and toddlers; responsive caregiving practices; observing development; relationship-based approach to curriculum and guidance; health, safety, and nutrition issues. Investigates state requirements for licensed infant/toddler homes and centers and accreditation and quality standards. Prereq or coreq: ECED 2930. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECED 2930. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

ECED 4102 - Developmentally Appropriate Curriculum Methods and Techniques (3 Credits)
Overview of early childhood curriculum development including processes for planning and implementing developmentally appropriate environments, materials, and experiences. Examines curriculum models and approaches for promoting development and learning in all developmental domains. Evidence-based practices for assessing young children. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4200 - Assessment for Early Childhood Classrooms (3 Credits)
This course reviews observation/assessment of young children—purpose, tools, and methods for children birth-age 8. Defines measurable outcomes, progress monitoring and use of assessment data to improve early intervention, curriculum planning, intentional teaching, instructional design, and monitor child outcomes. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

ECED 4202 - Child Guidance and Classroom Community (3 Credits)
This course presents evidence-based classroom strategies to promote social competence, build classroom community and reduce or prevent behavior problems. Emphasis is placed on understanding child development and observing behavior to make decisions for children ages birth through age 8. Cross-listed with ECED 1202. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4300 - Exceptional Learners in the Early Childhood Classroom (3 Credits)
Educating young children with disabilities in the early childhood setting: typical and atypical development, theoretical models, policy and legal requirements, evidence based research related to instructional design, intervention/curriculum planning and implementation. Introduction to embedded instruction and inclusive environments. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

ECED 4410 - Coaching for Early Childhood Professionals: Foundations (3 Credits)
The Foundations course focuses on learning, understanding and using relationship and evidence-based coaching skills in early childhood settings. Students will practice the fundamentals of coaching using a systematic, individualized, reflective approach and sharing experiences with others in the course. Cross-listed with ECED 5410. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4420 - Coaching Early Childhood Professionals: Awareness (3 Credits)
The Awareness course focuses on increasing coaches' skills at introspection, thoughtful planning, intentional application of coaching knowledge and skills, and continuous improvement. Students will integrate skills with effective application in class and real life coaching experiences, managing progress and accountability. Cross-listed with ECED 5420. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4430 - Coaching for Early Childhood Professionals: Attuning (3 Credits)
The Attuning course will integrate skills from the Foundations and Awareness courses to complete the EC Coaching Certificate. Students practice refining and altering coaching based on needs and readiness. Students learn sustainable organizational change that embed coaching in all professional practice. Cross-listed with ECED 5430. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECED 4650 - Dual Language Learners Learning and Development (3 Credits)
The course will review current research on the learning and development of young dual language learners (birth through 8) and the classroom environments and instruction that can promote their learning. The course uses a socio-cultural framework to view children's learning. Cross-listed with ECED 5650. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

ECED 4800 - Workshop: Topics in Early Childhood Education (1-4 Credits)
Topics and credit hours vary from semester to semester. Cross-listed with ECED 5800. Repeatable. Max hours:12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

ECED 4931 - Internship I & Collaborative Learning Community (2 Credits)
ECED 4931 is the first of 3 internships in the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice in order to be licensed as an early childhood educator. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4932 - Internship II & Collaborative Learning Community (2 Credits)
ECED 4932 is the second of 3 internships in the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice in order to be licensed as an early childhood educator. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

ECED 4933 - Internship III & Collaborative Learning Community (2-8 Credits)
ECED 4933 is the final internship in a series of three completed during the professional year of the ECE program plan that provides the necessary learning opportunities for candidates to gradually develop their practice to be licensed as an early childhood educator. Cross-listed with ECED 5933. Restriction: Professional Year Admission required. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

ECED 4934 - Extended Internship & Collaborative Learning Community (1-8 Credits)
ECED 4934 is an extended internship that supports students who need extended time in an internship in order to complete their ECE program and fully develop their practice in order to be licensed as an early childhood educator. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Economics (ECON)

ECON 1010 - Economics of Social Issues (3 Credits)
This course is designed for non-majors. Majors in economics will not receive credit toward departmental degree requirements. The focus of the course is on current issues in the economy, including poverty, social security, airline deregulation, government control of prices, economics of higher education, free trade, race and gender discrimination, unemployment, the role of government, and the national debt. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECON 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

ECON 2012 - Principles of Economics: Macroeconomics (3 Credits)
Covers topics of inflation, unemployment, national income, growth and problems of the national economy, stabilization policy, plus others at the discretion of the instructor. Purpose is to teach fundamental principles, to open the field of economics in the way most helpful to further a more detailed study of special problems, and to give those not intending to specialize in the subject an outline of the general principles of economics. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

ECON 2022 - Principles of Economics: Microeconomics (3 Credits)
Topics include price determination in a market system composed of households and firms: resource allocation and efficiency of various market structures, plus others at the discretion of the instructor. Note: Complementary to and normally taken following ECON 2012. ECON 2012 is not a prerequisite for ECON 2022. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

ECON 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Cross-listed with PBHL 3050 and PSYC 3050. Max hours: 3 Credits.
Grading Basis: Letter Grade

ECON 3100 - Economics of Race and Gender (3 Credits)
Overview of the determinants of wages, employment and education in the labor market. Emphasizes the investigation of the evidence and theories of differentials that appear to be associated solely with race and sex, and public policies associated with discrimination and poverty. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ECON 3300 - Economics of Crime and Punishment (3 Credits)
Presents the economic approach to crime. Teaches economic reasoning in the analysis of the determinants of criminal activity, provides an in-depth analysis of the importance of socioeconomic factors in determining crime. Investigates the relative importance of labor market conditions, deterrence, and other factors in the level of criminal activity. Also covers topics to reduce crime such as, the death penalty, issues around victimless crime and public choices. Prereq: ECON 2022 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 3366 - Managerial Economics (3 Credits)
Intelligent business decisions require an understanding of how firms relate to their competitors, customers, and investors. In this course, you will use basic microeconomic theory to distinguish between different competitive markets, to design profitable pricing strategies, and to make management decisions with a problem-solving approach. Brief case studies of actual business decisions are included. Math skills needed are the equivalent of high-school algebra and geometry. Note: Students will not receive credit for ECON 3366 if they take it simultaneously or after successfully completing ECON 4310. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Additional Information: Teikyo.
Typically Offered: Fall, Spring, Summer.

ECON 3400 - Economics of Sex and Drugs (3 Credits)
Examines the political and policy issues surrounding controversial topics in human behavior. Economic models and reasoning are applied to examine issues such as juvenile substance use and abuse, and teen pregnancy. Prereq: ECON 2022 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

ECON 3415 - Issues in International Trade and Finance (3 Credits)
A survey of International Trade and Finance is provided and then applied to contemporary issues such as gains from trade, global and local economic inequality, trafficking, global capital markets, debt, the Eurozone and transmission of inflations and recessions internationally. This course is for non-economics majors & economics minors. Students may not receive credit if they take it after they have completed ECON 4410 or ECON 4420. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012 and 2022 with a C- or higher

ECON 3770 - Issues in Economic Development (3 Credits)
This is a survey course in development economics intended to provide a basic understanding of the economies of developing nations. Topics include issues and policies in economic development, comparative economic growth, demographic change, poverty, inequality, and migration. This course is for non-economics majors & economics minors. Students may not receive credit if they take it after they have completed ECON 4770. Prereq: ECON 2012 or ECON 2022 with a C- or higher. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Econ 2012 or Econ 2022 with a C- or higher
Typically Offered: Spring, Summer.

ECON 3801 - Introduction to Mathematical Economics (3 Credits)
Introduces the use of mathematics in micro- and macro-economic analysis. Emphasis on model-building techniques, solution methods, and economic interpretations. Prereq or Coreq: ECON 2012 with a C- or higher, prereq: ECON 2022 and College Algebra or higher (MATH 1110 or MATH 1070 or MATH 1401 or MATH 1130 or MATH 2411 or MATH 2421) with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: ECON 2012 with a C- or higher, prereq: ECON 2022 and College Algebra or higher (MATH 1110 or MATH 1070 or MATH 1401 or MATH 1130 or MATH 2411 or MATH 2421) with a C- or higher
Typically Offered: Fall, Spring.

ECON 3811 - Statistics with Computer Applications (4 Credits)
Introduces statistical methods and their application to quantitative problems in economics and social sciences. Note: Recitation is required. Prereq or Coreq: ECON 2022 AND Prereq: College Algebra or higher (MATH 1110, MATH 1070, MATH 1401, MATH 2411, MATH 2421, MATH 1130, or ECON 3801) with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq or co-req: ECON 2022 AND Prereq: College Algebra or higher (MATH 1110, MATH 1070, MATH 1401, MATH 2411, MATH 2421, MATH 1130, or ECON 3801) with a C- or higher.
Typically Offered: Fall, Spring.

ECON 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

ECON 4001 - Topics in Economics (3 Credits)
Studies special topics in economics to be selected by the instructor. Note: May be repeated for credit when topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ECON 4030 - Data Analysis with SAS (3 Credits)
Covers techniques for handling and interpreting economic data and conducting econometric analyses using SAS programming. Provides hands-on data management and analyses with large data sets with applications to business and economics, and prepare students for SAS Base Programmer certification exam. Prereq: ECON 3811 with a C- or higher. Cross-listed with ECON 5030. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4050 - Special Economic Problems (1-8 Credits)
Provides students the opportunity to critically evaluate some practical and theoretical problems under supervision, and to present results of their thinking to fellow students and instructors for critical evaluation. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Note: ECON 4050 for majors in economics, others by permission of instructor. Cross-listed with ECON 5050. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Econ 2012 or Econ 2022 with a C- or higher

ECON 4071 - Intermediate Microeconomic Theory (3 Credits)
Production, price and distribution theory. Study of value and distribution theories under conditions of varying market structures, with special references to the contribution of modern theorists. Prereq: ECON 2022 and ECON 3801 or Calculus II or Calculus III with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and ECON 3801 or (MATH 2411 or MATH 2421 with a C- or higher)
Typically Offered: Fall, Spring.

ECON 4081 - Intermediate Macroeconomic Theory (3 Credits)
National income and employment theory. Primary emphasis placed on determination of employment and prices. Problems of unemployment and inflation analyzed and appropriate policies considered. Prereq: ECON 2012 and ECON 3801 or MATH 2411 or MATH 2421 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012 and ECON 3801 or (MATH 2411 or MATH 2421 with C- or higher)
Typically Offered: Fall, Spring.

ECON 4090 - History of Economic Thought (3 Credits)
Traces the development of economic thought from ancient times to the 20th century. Considers the context in which these ideas were developed and their relationship to modern economic thought and contemporary economic problems. Note: Students may not receive credit for this course if they have already received credit for ECON 4091. Prereq: ECON 2012 and ECON 2022 with a C- or higher. Cross-listed with ECON 5090. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Econ 2012 or Econ 2022 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4110 - Money and Banking (3 Credits)
Surveys major monetary and fiscal institutions such as commercial banks, the federal reserve system, savings institutions, and the structure of debt. The relationships between households, firms and financial intermediaries are explored, and the tools available to macroeconomic policy makers are described and evaluated. Prereq: ECON 4081 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4081 with a C- or higher.
Typically Offered: Fall.

ECON 4150 - Economic Forecasting (3 Credits)
Teaches forecasting techniques used in business and government to project trends and short-term fluctuations. Actual data are employed in instruction and labs. State-of-the-art spreadsheet and algorithms are introduced as part of the course work. Prereq: ECON 4811 with a C- or higher. Cross-listed with ECON 5150. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Spring.

ECON 4210 - Public Finance (3 Credits)
Surveys topics dealing with the economics of government activity, including the provision of public goods; the economics of the political process; welfare programs; pollution externalities; benefit-cost analysis; the U.S. tax structure; and the effects of taxes on economic behavior, economic performance and the distribution of income. Prereq: ECON 2022 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4240 - Economic Policy Analysis (3 Credits)
Deals with the application of economic analysis to the government policy-making process. Topics include public goods provision, externalities, cost-benefit analysis, judicial decision making, the economic analysis of the political process, government regulation of business, and tax incidence. Prereq: ECON 2012, ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2012, ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher)

ECON 4310 - Managerial Economics (3 Credits)
The course adapts standard theory to more realistically discuss enterprise structure, firm and managerial behavioral incentives, and strategic behavior. Once a foundation is laid, successful and unsuccessful strategies and case studies are presented. Note: Students will not receive credit for ECON 3366 if they take it simultaneously or after successfully completing ECON 4310. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5310. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 4318 - Urban Economics (3 Credits)
Why do cities form and why are they so productive? How does the value of land change as the urban landscape develops? How do we address the difficulties that challenge modern cities, such as affordable housing, congestion, and crime? Prereq: ECON 3811 and ECON 4071 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 and ECON 4071 with a C- or higher.
Typically Offered: Fall.

ECON 4320 - Financial Economics (3 Credits)
This course focuses on the economics of decision-making under conditions of risk and uncertainty. Topics include theories of efficient markets, rational expectations, speculative bubbles, random walks, portfolio analysis, options, derivatives and future markets. Emphasis is on the application of basic theories to economic agents' behavior and case studies. Prereq: ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher), and ECON 3811 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher and ECON 3801 with a C- or higher or (MATH 2411 or MATH 2421 with B or higher), and ECON 3811 with a C- or higher
Typically Offered: Spring.

ECON 4410 - International Trade (3 Credits)
Trade theory identifies who wins and loses from trade and why there are usually overall gains. Explores issues in immigration, globalization, income inequality, tariffs, dumping, the WTO, the environment, wages, and growth strategies among others. Prereq: ECON 3811 with a C- or higher. Cross-listed with ECON 5410. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4420 - International Finance (3 Credits)
The international adjustment process, including the foreign exchange market, balance of payments disequilibria, price and income adjustment, fiscal and monetary policy, and the international monetary system. Prereq: ECON 3811 with a C- or higher. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 with a C- or higher
Typically Offered: Fall, Spring.

ECON 4430 - Economic Growth (3 Credits)
Explores causes of rapid growth or decline over long periods for different regions of the world. Inequality, sustainability, culture, climate, technology and resources all play significant roles. Data and examples are used to determine the important influences. Prereq: ECON 2022 and ECON 3811 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and 3811 with a C- or higher
Typically Offered: Spring.

ECON 4461 - Economic Incentives (3 Credits)
A free market can fail with poorly designed economic incentives. The course examines incentives at work in a wide range of markets and investigates the market conditions that lead to a high level of welfare for the society. One such condition is the incentive for every participant to reveal his/her true preference. The incentive environments examined in this course include the principal-agent problems, job market signaling, mandatory retirement, professor's tenure, auctions of artifacts and assets, private provision of public goods, marriage matching, matching of organ donation (kidneys and lungs), school admissions, and majority voting. Prereq: ECON 3811, ECON 4071 and (ECON 3801 or MATH 2411 or MATH 2421) with a B+ or higher, or instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811, ECON 4071 and (ECON 3801 or MATH 2411 or MATH 2421) with a B+ or higher, or instructor permission.

ECON 4530 - Economics of Natural Resources (3 Credits)
Examines economic models of renewable resource management and models of exhaustible resource depletion. Analyzes decisions made by private firms and governments affecting the methods and rate of resource development. Examines the effects of resource development on economic growth and environmental quality and the effects of economic development on resource scarcity. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5530. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.

ECON 4540 - Environmental Economics (3 Credits)
Economic approach to environmental problems: relationship between ownership structures, externalities and environmental damage; poverty, population pressure, and environmental degradation; valuation of environmental amenities; sustainability of economic activity; cost-benefit analysis applied to the environment; evaluation of alternative instruments for environmental control. Prereq: ECON 2022 with a C- or higher. Cross-listed with ECON 5540. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4550 - Game Theory and Economic Applications (3 Credits)
An introduction to economic applications of game theory. Concepts such as strategic and extensive form games, existence and selection of equilibrium will be covered. These concepts will be applied to understand market structure, location decisions, price competition, contracting, and auctions. Prereq: ECON 4071 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4071 with a C- or higher
Typically Offered: Fall.

ECON 4610 - Labor Economics (3 Credits)
Studies problems associated with the determination of wages, hours, and working conditions in the American economy. Strong emphasis placed on current research in such areas as welfare reform, minimum wage, return to schooling, immigration, labor market discrimination, and trade unions. Prereq: ECON 4811 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Fall.

ECON 4640 - Sports Economics (3 Credits)
Applies economic analysis to sports. Explores topics such as competition, on-field performance, players' compensation, profits in professional sports, anti-trust and labor law, the impact of sports on local communities and the links between athletics and education. Prereq: ECON 2022 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 with a C- or higher.
Typically Offered: Spring.

ECON 4660 - Health Economics. (3 Credits)
This course focuses on the analysis of current health care markets. Topics include the production of health, demand for health care, physician and hospital behavior, health insurance, medical malpractice, health externalities, managed care and the affordable care act. Prereq: ECON 3811 and 2022. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 and 2022
Typically Offered: Fall, Spring.

ECON 4670 - Economics of Population and Growth (3 Credits)
Theoretical modeling and data analysis will be used to analyze the economic causes, consequences and policy responses to population change through changes in fertility, marriage, health, mortality and migration. Prereq: ECON 2022 and (ECON 3811 or ECON 4811) with a C- or higher or instructor approval. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 2022 and (ECON 3811 or ECON 4811) with a C- or higher
Typically Offered: Fall.

ECON 4740 - Industrial Organization (3 Credits)
Examines the determinants of, and linkages between, market structure, firm conduct, and industrial performance. Topics include: determinants of the market size; impact of different market structures on prices and outputs; strategic behavior of firms to prevent entry or induce exit of rival firms; collusion; price discrimination; advertising; competition, monopoly, and innovation; implications for economic efficiency and public policy. Prereq: ECON 4071 with a C- or higher. Cross-listed with ECON 5740. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4071 with a C- or higher
Typically Offered: Spring.

ECON 4770 - Development Economics (3 Credits)
This course provides a theoretical and empirical framework for analyzing economic problems in developing countries focusing on the role of individuals, families and institutions. Topics include poverty traps, human capital accumulation, gender discrimination, microcredit and violent conflict. Prereq: ECON 4811 with a C- or higher. Cross-listed with ECON 6770. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.
Typically Offered: Fall.

ECON 4803 - Mathematical Economics (3 Credits)
Application of mathematical techniques in micro-and macro-economic analysis. Topics include single and multivariable differentiation, basic matrix algebra, optimization, and integration with applications to economic models of consumption, production, market equilibrium, national accounting, and growth. Prereq: ECON 3801 or MATH 2411 or MATH 2421 and ECON 4071 with a C- or higher. Cross-listed with ECON 5803. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3801 or MATH 2411 or MATH 2421 and ECON 4071 with a C- or higher.
Typically Offered: Fall, Spring.

ECON 4811 - Introduction to Econometrics (3 Credits)
Introduces econometric methods and their applications to quantitative economic problems. Simple and multiple regression models and problems encountered in their applications are developed in lectures and applied computer projects. Prereq: ECON 3811 or MATH 3382 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 3811 or MATH 3382 with a C- or higher.
Typically Offered: Fall, Spring.

ECON 4812 - Advanced Econometric Methods (3 Credits)
This course will focus on econometric methods used to generate causal inference in experimental and non-experimental settings. Topics covered will include the potential outcomes framework, randomized experiments, natural experiments, difference-in-differences, fixed effects, matching, instrumental variables, and regression discontinuity. Prereq: ECON 4811 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ECON 4811 with a C- or higher.

ECON 4840 - Independent Study: ECON (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ECON 4850 - Honors Independent Study: ECON (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Report as Full Time.
Typically Offered: Fall, Spring, Summer.

ECON 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Education and Human Development (EDHD)

EDHD 1019 - Introduction to Urban Education (3 Credits)
In this course you will examine the sociological issues related to urban schools, communities, and teaching. We will looks at such topics as school culture, diversity, ethnicity, and social realities in American schools. Students will critically examine current education issues that affect their lives, their local community, and P-12 classrooms throughout the state and the country. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDHD 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshmen level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

EDHD 1930 - Community Based Field Experience & Seminar (3 Credits)
Students learn the dispositions of a community-grounded educator and develop an asset-based lens for working with students, families, and communities through 60 hours of required field experience and a mediated seminar. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDHD 2050 - Current Topics in Education and Human Development (1-3 Credits)
Current topics that explore community and educational settings in Education and Human Development (EDHD) to be selected by the instructor. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

EDHD 2840 - Independent Study in Education & Human Development (1-6 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

EDHD 2910 - Service Learning in Education and Human Development (1-4 Credits)
This course prepares our students to become responsible and resourceful citizens who partner with community organizations and work to serve a wide range of needs and issues within culturally and linguistically diverse environments. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

EDHD 2930 - Learning & Development Field Experience & Seminar (2-3 Credits)
Teacher candidates engage in field experience 2, half-days per week in early childhood and primary classrooms working with children to support literacy learning while also observing, documenting and reflecting on how learning & development is facilitated. Prereq or coreq: LCRT 3720 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: LCRT 3720 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours

EDHD 3930 - Diverse Learners Field Experience & Seminar (3 Credits)
EDHD 3930 is a comprehensive clinical block field experience designed to support teacher candidates' learning of issues and practices relevant to students with disabilities and English language learners. A seminar will mediate teacher candidates' experiences from their various classroom settings. Prereq or Coreq: SPED 4030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPED 4030.

EDHD 4050 - Special Topics in Education and Human Development (1-3 Credits)
Advanced study of special topics that examine community and educational settings in Education and Human Development (EDHD) to be selected by the instructor. Maybe repeated for credit. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Educational Foundations (EDFN)

EDFN 1000 - Equality, Rights & Education (3 Credits)
Examines the history of U.S. public schooling through landmark court cases. Investigates/analyzes how apartheid came to be institutionalized, how forces of desegregation achieved a series of momentous victories, and how those victories have been undermined through the resegregation of schools. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

EDFN 1010 - Lived Experiences and 21st Century Skills: An Introduction (1-5 Credits)
This internship course introduces the idea of 21st century skills embedded in various learning contexts and connecting them with lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall.

EDFN 1111 - First Year Seminar (3 Credits)
Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

EDFN 2030 - Lived Experiences and 21st Century Skills: Academic and Professional Skills (1-5 Credits)
This internship course connects 21st century skills embedded in academic and professional learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.

EDFN 2060 - Lived Experiences and 21st Century Skills: Innovation and Critical Thinking (1-5 Credits)
This internship course connects 21st century skills embedded in innovation and critical thinking learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 2080 - Lived Experiences and 21st Century Skills: Global Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in Global Literacies rich learning contexts with students' lived experiences. Internship activities include entry level career and experiences workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3000 - Undocumented Mexican Immigration (3 Credits)
The socio-legal construction of Mexican undocumented immigration from the early decades of the twentieth century to the current era is addressed. Social justice questions including access to higher education arising from the racialization of Latino/a immigrants are also examined. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

EDFN 3010 - Lived Experiences and 21st Century Skills: Wilderness Medicine in Outdoor Education (1-6 Credits)
The course provides educators who integrate outdoor education in their teaching a theoretical knowledge of and practical application of wildness medicine care, risk management in remote and austere environments. Students build self-awareness and critical thinking through reflective exercises in personal risk management, leadership, and decision making. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

EDFN 3020 - Lived Experiences and 21st Century Skills: Environmental and Civic Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in Environmental and Civic Literacies learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3070 - Lived Experiences and 21st Century Skills: Digital Literacies (1-5 Credits)
This internship course connects 21st century skills embedded in digital literacies learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 3090 - Lived Experiences and 21st Century Skills: Social Emotional Learning (1-5 Credits)
This internship course connects 21st century skills embedded in Social Emotional rich learning contexts with students' lived experiences. Internship activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 4000 - Food Justice in City & Schools (3 Credits)
Food justice examines systemic inequities in access to healthy food. The history of school/community gardens, developments in urban agriculture and school/city policies are examined. The intersection of urban agriculture, hunger, and schooling/learning is examined in school gardens and school farmer's markets. Cross-listed with EDFN 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

EDFN 4001 - Problematizing Whiteness: Educating for Racial Justice (3 Credits)
Critical Whiteness Studies provides a deeper analysis of race that accounts for both sides of the race coin: the plight of people of color AND how Whites are complicit. This class looks deeper into how race operates within White contexts and how that impacts people of color so we bridge how Whites AND people of color can work together towards a racially equitable society. Cross-listed with ETST 4010 and EDFN 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade

EDFN 4010 - Social Foundations and Cultural Diversity in Urban Education (3 Credits)
This course focuses on the role of cultural diversity in the United States school system and what this means for educators oriented toward social justice. The intention of this course is to have teacher candidates engage in exploring the most salient issues surrounding education in the United States, developing an understanding of the complex relationships between schools and the larger society of which they are a part. This course closely examines important contemporary and historical societal issues such as race, social class, gender, ethnicity, sexual identity, politics, and dynamics of power and privilege. Cross-listed with EDFN 5010. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor EDST-MIN or CLAS secondary students.

EDFN 4040 - Lived Experiences and 21st Century Skills: Collaboration (1-5 Credits)
This internship course connects 21st century skills embedded in collaborative learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

EDFN 4050 - Lived Experiences and 21st Century Skills: Communication (1-5 Credits)
This internship course connects 21st century skills embedded in communication learning contexts with students' lived experiences. Internships activities include entry level career experiences and workplace competencies. Repeatable. Max hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Typically Offered: Fall, Spring, Summer.

Electrical Engineering (ELEC)

ELEC 1201 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, ENGR 1200, MECH 1200 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ELEC 1510 - Digital Logic (3 Credits)
The design of combinatorial and sequential switching circuits. Topics include Boolean algebra, Boolean function minimization technique, combinatorial circuit analysis and synthesis, synchronous sequential circuit analysis and synthesis, algorithmic state machine design, asynchronous sequential circuit analysis and synthesis. Max hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 1520 - Programming for Electrical Engineers (3 Credits)
An introductory course in programming using C/C++ and Python. The objective of the course is to examine the design of programs using language concepts, data structures, algorithms, and object-oriented design techniques to solve fundamental engineering problems. Students develop skills to program, construct data structures, and test & debug solutions, while gaining knowledge of the fundamental elements and operation of computer systems. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 2132 - Circuit Analysis I (3 Credits)
Introduces circuit analysis: basic principles, operational amplifier circuits, first-order and second-order circuits, steady-state sinusoidal analysis with phasor mathematics. Prerequisite: Math 2411 with a C- or higher and Phys 2311 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 and MATH 2411 with a C- or higher

ELEC 2142 - Circuit Analysis II (3 Credits)
Sequential course after ELEC 2132. Topics include: Solution of circuits using Laplace transforms, frequency domain analysis, additional steady-state solutions, Bode plots, active filters, pulses, impluses, and computer-aided analysis. Prerequisite: Math 2421 with a C- or higher and Phys 2331 with a C- or higher, Elec 2132 with a C- or higher. This course can be taken stand alone without a lab. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2132, MATH 2421 and PHYS 2331 with a C- or higher.

ELEC 2520 - Embedded Systems (3 Credits)
A second semester computer engineering course covering microcontroller & microprocessor-based embedded system design and interfaces including peripherals, development tools, constraints and interfacing between physical world and device. Prereq: ELEC 1520 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 1520 with a C- or higher.

ELEC 2531 - Logic Laboratory (1 Credit)
Experiments in digital logic utilizing both computer simulation and actual analysis using integrated circuits. Initially, combinational logic circuits are studied, including circuits such as binary adders and multipliers, followed by sequential circuits, including counters. Meters and oscilloscopes are introduced. Use of computer-aided design tools facilitating design, simulation, and implementation of digital systems using field-programmable logic devices are an integral part of the entire course. Coreq: ELEC 1510. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 1510.

ELEC 2651 - Signal Processing (3 Credits)
Introduction to discrete-time signal processing and frequency domain analysis. Sampling and interpolation, discrete Fourier transform, effects of filtering and modulation of signals. Concepts are explored in the context of multimedia, communications, and data analysis applications. Emphasizes computer-based signal processing using MATLAB. Prereq: ELEC 1520 with a C- or better. Coreq: MATH 3195 or MATH 3191. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 1520 with a C- or better. Coreq: MATH 3195 or MATH 3191.

ELEC 3030 - Electric Circuits and Systems (3 Credits)
This basic electrical engineering course is for non-majors (does not apply to BSEE degree). Students study circuit analysis, transformers, electric motors, and simple electronic circuits (diodes and transistors). Prereq: MATH 2421 and PHYS 2331 with a C- or higher. Restriction: Restricted to majors within the College of Engineering, Design and Computing. Cross-listed with MECH 3030. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 and PHYS 2331 with a C- or higher Restriction: Restricted to majors within the College of Engineering, Design and Computing

ELEC 3133 - Electromagnetic Fields (3 Credits)
Fundamental physics and applications of electric and magnetic fields are covered. Topics include: vector analysis in multiple coordinate systems, Maxwell's equations in free space and material regions including boundary conditions, static and quasi-static electric and magnetic fields, uniform plane waves for free space and for materials. Prerequisite: MATH 2421 with a C- or higher and PHYS 2331 with a C- or higher, ELEC 2132 with a C- or higher, MATH 3195 with a C-or higher. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2132, MATH 2421, MATH 3195 (or MATH 3191 and MATH 3200), and PHYS 2331 all with a grade of C- or higher. Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 3164 - Energy Systems (3 Credits)
Explores various energy resources and modern conversion systems utilized to generate, store, process, and deliver electric power. Topics include electromechanical, electrochemical, and renewable energy systems, as well as switch-mode power processing and power networks. Prereq: ELEC 2142 with a C- or higher, and ENGR 1130 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or higher, and ENGR 1130 with a C- or higher.

ELEC 3225 - Electronics (4 Credits)
BJT and FET transistor models at high frequencies, multistage amplifiers, frequency response of amplifiers. Feedback, operational amplifiers, oscillators, power amplifiers, and introduction to power electronics. Prereq: ELEC 2142, PHYS 2331 and ENGR 1130. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or better, PHYS 2331 with a C- or better and ENGR 1130 with a C- or better. Restriction: Restricted to students within the College of Engineering, Design and Computing.

ELEC 3316 - Signals and Systems (3 Credits)
Introduces the fundamentals of signals and systems analysis. Topics include: time domain analysis of continuous and discrete time systems, frequency domain (Laplace and z-transform) analysis, applications to filters and feedback systems, Fourier transform for both continuous and discrete time signals, sampling and signal reconstruction, applications to communication systems and state space representation. Learning experience is enhanced by using MATLAB-based examples and experiments. Prereq: ELEC 2142 with a C- or higher, ELEC 2651 with a C- or higher, MATH 3195 with a C- or higher or MATH 3191 and MATH 3200 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or higher, ELEC 2531 with a C- or higher, ELEC 2651 with a C- or higher, MATH 3195 with a C- or higher or MATH 3191 and MATH 3200 with a C- or higher.

ELEC 3520 - Intelligent Systems: IoT & Cyber-Physical Systems (3 Credits)
A computer engineering course covering intelligent systems that include applications with connected Internet-of-Things (IoT) devices and cyber-physical elements. An intelligent system consists of a collection of computing devices communicating with one another and capable of interacting with the physical world. The course explores the system design and software development process to deploy real-time embedded applications in real-world scenarios. Topics include multiple hardware and software systems necessary to perform sensing, actuation, processing, and communication with connected computing devices. Prereq: ELEC 2520 with a C- or better, ELEC 2531 with A C- or better and ELEC 2651 with a C- or better. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: ELEC 2520 with a C- or better, ELEC 2531 with A C- or better and ELEC 2651 with a C- or better.

ELEC 3701 - Machine Learning for Engineers (3 Credits)
The course introduces the mathematical formalism and software for machine learning approaches in electrical engineering problems. Selected applications include signal detection, signal classification, remote sensing, imaging, and model optimization. Topics include: linear and logistic regression, support vector machines, clustering, artificial neural networks, hypothesis testing, and Bayesian analysis. Prereq: ELEC 3817 with a C- or better and MATH 3195 with a C- or better or MATH 3191 and MATH 3200 and ELEC 2520 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3817 with a C- or better AND (MATH 3195 or (MATH 3191 and MATH 3200 with a C- or better and ELEC 2520))

ELEC 3724 - Energy Systems Laboratory (1 Credit)
Provides hands-on experience on electromechanical, electrochemical, and semiconductor-based energy conversion systems. Sessions include operation of induction motor and generator, energy storage, and renewable energy experiments. Prereq: ELEC 2142 with a C- or better. Prereq or Coreq: ELEC 3164. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 2142 with a C- or better. Prereq or Coreq: ELEC 3164.

ELEC 3817 - Engineering Probability and Statistics (3 Credits)
Topics include: definition of probability, conditional probability, independence, combined experiments and Bernoulli trials, random variables, joint distribution and density functions, correlations, sample mean and variance. Also, introduction to random processes, auto and cross correlation functions, spectral density of random signals, responses of a linear system to random inputs. Prereq: MATH 3195 with a C- or better and Math 2421 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 with a C- or better and Math 2421 with a C- or better.

ELEC 3900 - Circuit Design and Fabrication Laboratory (3 Credits)
Hands on laboratory course that involves electrical measurement and diagnosis in the context of electrical circuit design, fabrication, and validation. Standard benchtop tools of oscilloscope, signal generator, digital multi-meter, DC power supply are introduced. Final project involves layout and fabrication of a printed circuit board (PCB). Prereq: ELEC 3225 with a C- or better and ELEC 2142 with a C- or better. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 with a C- or better and ELEC 2142 with a C- or better.

ELEC 3939 - Internship (1-3 Credits)
Students gain engineering design experience involving application of specific technical concepts and skills in a supervised industrial environment. (Must have approval from ELEC faculty.) Prereq: ELEC 2142. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 2142

ELEC 4005 - IC Design (3 Credits)
Explores digital integrated circuit design including MOS processing steps, physical operation, building blocks of digital circuits, advanced nMOS, pMOS and CMOS circuit design, silicon VLSI technology and circuit and chip level. Spice and lay-out Editor are used. The physical relationship between circuit design and actual silicon layout and structure and technology are emphasized. Prereq: ELEC 3225. Cross-listed with ELEC 5005. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225.

ELEC 4025 - Device Electronics (3 Credits)
A course relating performance and limitations of solid state devices to their structures and technology. For both advanced circuit and device engineers. Semiconductor physics and technology, pn-junction and MOS devices used in modern integrated circuits. Prereq: ELEC 3225 and senior standing. Cross-listed with ELEC 5025. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 Restriction: Senior standing

ELEC 4133 - Advanced Electromagnetic Fields (3 Credits)
A course focused on electromagnetic waves. Topics include: electromagnetic power, reflection and transmission of uniform plane waves in layered media, rectangular wave guides, two-conductor transmission lines, Smith Chart representation of wave impedance and reflection. Prereq: ELEC 3133. Cross-listed with ELEC 5033. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4134 - Introduction to Microwave Circuit Design (3 Credits)
This course provides the basic principles of microwave circuit design, including transmission line theory, network parameters, signal flow graphs, design of high frequency matching networks, filters, hybrids and couplers using waveguide elements, high frequency amplifier and mixer design. Prereq: ELEC 3133. Cross-listed with ELEC 5134. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4136 - Control Systems Analysis (3 Credits)
Introduces students to the fundamentals of analysis and design of feedback systems. Topics include: mathematical models of linear continuous-time systems applied to modeling physical systems in the time and frequency domain, control system characteristics, Routh's stability and transient response analysis, Nyquist stability and polar plots, analysis and design of linear control systems by root locus and frequency response, methods, compensator implementation, finite-precision numerical effects, round-off errors, and computer-based design applications. Prereq: ELEC 3316. Coreq: ELEC 3817. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 Coreq: ELEC 3817 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4154 - Electric and Hybrid Vehicle Powertrains (3 Credits)
Covers the fundamental components and operation of electric and hybrid vehicles' drivetrain. Topics include electric vehicle history, major vehicle components, fundamental vehicle dynamics, electric and hybrid drivetrain configurations, electric motors and drives, energy storage, and power electronics chargers. Cross-listed with ELEC 5154. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ELEC 4164 - Electric Machines and Drives (3 Credits)
Covers power electronics drives for rotating electric machinery. Topics include power electronics elements for drives, load characteristics, dynamic modeling of AC machines, fundamental control algorithms, simulation and practical commercial drives. Prereq: ELEC 3164. Cross-listed with ELEC 5164. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4170 - Electric Machines and Drives Laboratory (1 Credit)
Offers hands-on experience on rotating electric machine drive simulations and commercial systems. Sessions include pulse-width modulation (PWM) inverter, induction, DC, and synchronous machine drives. Matlab/Simulink and a commercial inverter will be utilized. Prereq or Coreq: ELEC 4164/5164 or equivalent. Cross-listed with ELEC 5170. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: ELEC 4164 or ELEC 5164
Typically Offered: Fall.

ELEC 4174 - Power Electronic Systems (3 Credits)
Topics to be covered include: power electronics fundamentals and applications in power systems; uncontrolled, semi-controlled and fully controlled power semiconductors; converters design and control. Prereq: ELEC 3164. Cross-listed with ELEC 5174. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4184 - Power Systems Analysis (3 Credits)
Topics to be covered include: complex power; per-unit quantities; modeling of generators, transformers and transmission lines; power flow problem; economic dispatch; faults and sequence networks; and an introduction to power system protection and dynamics. Prereq: ELEC 3164. Cross-listed with ELEC 5184. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4225 - Advanced Electronics (3 Credits)
Switching state models of discrete components and integrated circuits, including logic gates, comparators, and operational amplifiers. Input, output, and transfer characteristics. Non-ideal properties. Analog-digital and digital-analog conversion. MOS-integrated circuits. Prereq: ELEC 3225 and Coreq: ELEC 3900. Restriction: Restricted to students within the College of Engineering, Design and Computing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225 and Coreq: ELEC 3900. Restriction: Restricted to students within the College of Engineering, Design and Computing.

ELEC 4247 - Communication Theory (3 Credits)
Introduces the principles of analog and digital communication systems. Series expansion and Fourier Series and transforms. The sampling theorem. Stochastic principles and noise. Linear systems and Fourier analysis. Design of transmitters and receivers: modulation and demodulation schemes. Some information theoretic concepts: source coding, channel coding, channel capacity and performance measures. Prereq: ELEC 3316 and 3817. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: ELEC 3316 and 3817

ELEC 4248 - Digital Communication Systems (3 Credits)
Introduces digital communication systems covering elements of information theory; mathematical representation of signals and systems; modulation and demodulation for the additive Gaussian noise channel; performance analysis of various transmission formats; synchronization; coded waveforms; decoding algorithms; and other related topics. Prereq: ELEC 3316, 3817; recommended ELEC 4247. Cross-listed with ELEC 5248. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req: ELEC 3316 and 3817

ELEC 4249 - Wireless networking (3 Credits)
Fundamentals of wireless communication from a physical-layer perspective. Multipath signal propagation and fading channel models. Design of constellations to exploit time, frequency, and spatial diversity. Reliable communication and single-user capacity. Interference management, multiple-access protocols, and multi-user capacity. Cellular uplink and downlink. Multiple-antenna systems and architectures. Communications with Intelligent Reflecting Surfaces. mmWave and THz communications. Connections to modern standards. Prereq: Elec 3817 and Elec 3316. Cross-listed with ELEC 5249. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817

ELEC 4250 - Information Inference and Learning Algorithms (3 Credits)
We indulge in a journey from the theory of information to the world of applications. We talk about what information means and provide the means to measure it. We then investigate various methods for extracting what matters from the available data. We bring in topics such as Bayesian data modeling, clustering algorithms, and neural networks to name a few. Prereq: ELEC 3316 and ELEC 3817 with a C- or higher. Cross-listed with ELEC 5250. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817 with a C- or higher.
Typically Offered: Fall.

ELEC 4276 - Digital Control Systems (3 Credits)
Topics to be covered include: discrete-time systems and the z-transform, characteristics of open-loop and closed-loop discrete-time systems, time-response characteristics and stability analysis, design of digital and hybrid control systems using z-transform, root locus, frequency domain, and state variable compensation techniques, compensator on, implementation, and computer-based design applications. Prereq: ELEC 3316 and ELEC 3817. Cross-listed with ELEC 5276. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4309 - Senior Design Project I (3 Credits)
Design methodology and tools, project planning and team building, ethics in engineering and research, career planning and portfolio building. Project designs are completed and presented to the class. Prereq: ELEC 2531. Coreq: ELEC 3133, 3164, 3225, 3316, 3520, 3701, 3724, 3817 and 3900. Restriction: Restricted to undergraduate majors within the College of Engineering, Design and Computing. ELEC 4309 and ELEC 4319 must be completed in subsequent academic semesters. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 2531 Coreq: ELEC 3133, 3164, 3225, 3316, 3520, 3701, 3724, 3817 and 3900. Restricted to undergraduate majors within the College of Engineering, Design and Computing. ELEC 4309 and ELEC 4319 must be completed in subsequent academic semesters.

ELEC 4319 - Senior Design Project II (3 Credits)
Project designs completed in ELEC 4309 are constructed and tested. Oral and written presentations of the completed project performance are required. Prereq: ELEC 4309 in subsequent academic semester. Students must complete their Graduation Agreement prior to enrollment. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 4309 Restriction: Restricted to majors within the College of Engineering, Design and Computing

ELEC 4333 - Introduction to Computational Electromagnetics (3 Credits)
An intro to computational electromagnetics based on the Finite Difference Time-Domain (FDTD) covering, finite difference methods, the Yee algorithm, numerical error, stability, boundary conditions, source excitations, hands-on programming experience and application of FDTD to real problems. Prereq: ELEC 3133. Cross-listed with ELEC 5333. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4373 - Optical Engineering (3 Credits)
This course introduces some of the most important concepts in optical engineering and prepares students a solid foundation to apply them to applications in the industry and academic research. Prereq: ELEC 3133 Electromagnetic Fields. Cross-listed with ELEC 5373. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3133

ELEC 4375 - Engineering Neuroscience (3 Credits)
In this course, mathematical models and data processing strategies will be introduced as well as other cutting-edge research techniques to help students understand how these techniques can be applied to solve modern neuroscience problems. Prereq: ELEC 3316 or graduate standing. Cross-listed with ELEC 5735 and NRSC 7674 (Anschutz Medical Campus course). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 or Graduate Standing

ELEC 4406 - Control Systems Laboratory (1 Credit)
This lab includes system identification, design of velocity control systems, design of PID controllers and control systems using state variable feedback. Prereq or Coreq: ELEC 4136 or 4276. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or Coreq: ELEC 4136 or 4276.

ELEC 4423 - Radio Frequency Laboratory (1 Credit)
Projects involve modern RF analyzers, wave-guide devices, time-domain techniques, characterization of filters/amplifiers, signal propagation and scattering, harmonic mixing, and radio frequency identification. Students will gain experience using MATLAB for data acquisition and processing. Prereq: ELEC 3133 and ELEC 3225. Cross-listed with ELEC 5423. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3133 and ELEC 3225.

ELEC 4435 - Advanced Electronics Laboratory (1 Credit)
Projects related to digital logic, analog and digital switches, A/D and D/A converters, and design of signal filters. Prereq: ELEC 3225. Coreq: ELEC 3900 and ELEC 4225. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3225. Coreq: ELEC 3900 and ELEC 4225.

ELEC 4444 - Power Systems Laboratory (1 Credit)
This lab introduces the student to modern computational tools used in power system analysis. Algorithms to solve the "power flow problem," the "economic dispatch problem," and the "optimal power flow problem" are discussed and implemented in the Matlab-Simulink mathematical analysis software package. Coreq: ELEC 4184. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4184.

ELEC 4466 - Adaptive Control System Design (3 Credits)
Basic concepts in adaptive feedback control. Overview of application areas. Stability of non-linear systems and hyperstability approach to the design of adaptive controllers. Passivity concept and Liapunoy stability. Design of model reference adaptive systems, self-tuning regulators, stochastic adaptive, and dual control systems. Computer-based design applications. Emphasis is placed on design projects. Prereq: ELEC 4136 or 4276. Cross-listed with ELEC 5466. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 4136 or 4276 Coreq: ELEC 4247 or 4248

ELEC 4467 - Communications Laboratory (1 Credit)
Analysis and design in three main areas: traditional analog communications at low and medium frequencies, digital communications, and microwave communications systems. Extensive use of spectrum analysis from low frequencies up to microwave range. Projects include noise, AM, FN, PM, PLL, sampling, quantizing, encoding, TDM, FSK, QPSK, 16QAM, receivers, and satellite communications systems. Prereq: ELEC 3735; Prereq or Coreq: ELEC 4247 or ELEC 4248. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3735 and 4247 or 4248

ELEC 4474 - Power Electronics Laboratory (1 Credit)
The power electronics laboratory introduces students to seven fundamental switchmode power conversion topologies, along with voltage and current feedback control, assembled on a reconfigurable power pole circuit board with external power supplies and laboratory. Coreq: ELEC 4174. Cross-listed with ELEC 5474. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4174 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4501 - Microprocessor Based Design (3 Credits)
Covers advanced treatment of embedded system design using microprocessors. Analog input circuitry is interfaced to a microprocessor, and a PC board layout is created to develop a complete system design. Software/Operating System is implemented for realtime I/O. Prereq/Coreq: ELEC 3520. Cross-listed with ELEC 5501. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq/Coreq: ELEC 3520.

ELEC 4511 - Hardware-Software Interface (3 Credits)
Computer engineering methods in hardware and software design applied to problems drawn from the mini- and micro-computer systems field. Hardware and software techniques for the design of combined hardware or software are developed. Interface and real-time programming techniques are considered. Graduate level requires additional projects and homework. Prereq: ELEC 3520. Cross-listed with ELEC 5511. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4521 - Microprocessor Laboratory (1 Credit)
Provides support for the projects assigned in ELEC 4501 - a complete embedded system is designed, built and tested. Coreq: ELEC 4501. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: ELEC 4501

ELEC 4531 - Introduction to Deep learning and PyTorch (3 Credits)
This course provides a foundation on neural networks of deep learning. Students will gain both theoretical and practical understanding of different deep neural networks and will work on a few real-world problems. Prereq: ELEC 3520. Cross-listed with ELEC 5531. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.
Typically Offered: Spring, Summer.

ELEC 4541 - Advanced Deep Learning for Computer Vision (3 Credits)
This course introduces the state-of-the-art deep learning research work. Students will gain both theoretical and practical understanding of deep learning in computer vision area. Prereq: ELEC 3520. Cross-listed with ELEC 5541. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.
Typically Offered: Spring, Summer.

ELEC 4555 - VLSI Circuit Simulation (3 Credits)
Computer methods for large integrated circuits. Theory and practice of VLSI circuit simulation. Nodal formulations of networks. Computer generation of sensitivities. Modeling active devices. DC solution of nonlinear networks. Prereq: ELEC 3225. Cross-listed with ELEC 5555. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225.

ELEC 4561 - Hardware-Software Lab (1 Credit)
Projects related to the software interface of a processor to external devices. Topics include A/D converters, serial and parallel interfaces. Prereq: ELEC 3520 and Coreq: ELEC 4511. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: ELEC 3520 and Coreq: ELEC 4511.

ELEC 4637 - Digital Signal Processing (3 Credits)
Discrete-time signals and systems in the time and frequency domain. Digital filter structures, design of FIR filters by windowing, optimum approximations of FIR filters. Design of digital IIR filters from continuous time domain. Computer-aided design of digital filters. The discrete Fourier transform and DSP algorithm implementation. Analysis of finite word length effects. Application of digital signal processing. Prereq: ELEC 3316 and 3817. Cross-listed with ELEC 5637. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316 and ELEC 3817

ELEC 4644 - Introduction to Biomedical Imaging (3 Credits)
An important component of the recent expansion in biomedical engineering is the area of biomedical imaging. This ELEC 4644/5644 course is an introduction to biomedical imaging systems, not only covering the fundamentals of imaging physics but also the applications of four primary biomedical imaging modalities: X-Ray Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Nuclear Medicine (i.e. PET, SPECT), and Ultrasound Imaging. Prereq: ELEC 3316. Cross-listed with ELEC 5644. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4678 - Quantum Computing (3 Credits)
The course teaches students the principles, the algorithms and the programming methods of quantum computing, and also discusses the associated physics and mathematics background required. Other related topics such as quantum communication and quantum entanglement will also be discussed. Prereq: PHYS 2331 and ELEC 3817 with a C- or better. Cross-listed with ELEC 5678, PHYS 4678, and PHYS 5678. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331 with a C- or better, and ELEC 3817 with a C- or better.

ELEC 4679 - Quantum Computing Algorithms (3 Credits)
The course discusses several seminal quantum algorithms, including the quantum Fourier transforms, Grover's and Shor's algorithms, followed by explaining several advanced quantum computing algorithms, including quantum error correction, sparse linear systems, and variational eigensolver. Google Cirq quantum programming library will be used for actual quantum programming implementations of the algorithms discussed. Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900. Cross-listed with ELEC 5679, PHYS 4679, and PHYS 5679. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900.
Typically Offered: Fall.

ELEC 4680 - Quantum Computing Technology (3 Credits)
Students will explore some of the concepts and experimental practices for realizing quantum computers. They will engage in laboratory practice of relevant skills including high-performance analog electronics; optics based quantum encryption and eraser implementations; RF electronics; and vacuum and cryogenic techniques. Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900. Cross-listed with ELEC 5680, PHYS 4680, and PHYS 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3225, ELEC 3316, ELEC 3817 and ELEC 3900.
Typically Offered: Fall.

ELEC 4681 - Quantum Technology Systems (3 Credits)
Students will explore a systems approach toward experimental practices for realizing quantum information science and engineering (QISE), with a focus on vacuum and cryogenic techniques and integration of electronics subsystems into a "dry" cryostat. They will engage in laboratory practice of relevant skills including creation and measurement of high vacuum, methods for reaching ultra-low temperatures, concerns in the design and construction of cryogenic apparatuses, and operation of a "dry" cryogenic system at 4 K, including measurements on superconducting quantum interference devices. Cross-listed with PHYS 4681, PHYS 5681 and ELEC 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

ELEC 4688 - Introduction to Nondestructive Testing (3 Credits)
A basic, broad understanding of the principles of nondestructive testing and evaluation is provided. The main objective of this course is to attract students to NDT fields and eventually help address the increasing needs of NDT engineers and technicians. Interaction and collaboration with local NDT industries will also be emphasized. As an introductory course, a broad interdisciplinary knowledge of NDT will be covered in the following sub-areas: Visual, Penetrant, Magnetic Particle, Eddy Current, Microwave, Ultrasonic, and Radiography. Prereq: ELEC 3316. Cross-listed with ELEC 5688. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3316

ELEC 4723 - High Performance Computer Architecture (3 Credits)
High Performance Computer Architecture covers the design of advanced computing systems. In particular, the course includes the design of modern microprocessors, characteristics of the memory hierarchy, and issues involved in multithreading and multicore architectures. Prereq: ELEC 3520. Cross-listed with ELEC 5723. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4727 - Computer Vision & Image Processing Acceleration (3 Credits)
Real-time constraints on computer-vision and image processing applications have motivated numerous explorations of multicore architectures to provide more efficiency through hardware parallelism and acceleration. This course undertakes the study of image processing and computer vision algorithms in the context of parallel hardware. Prereq: ELEC 3520. Cross-listed with ELEC 5727. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ELEC 3520.

ELEC 4755 - Renewable Energy Systems (3 Credits)
This course focuses on the modeling, analysis and control of grid-connected wind and photovoltaic energy systems. Prereq: ELEC 3164. Cross-listed with ELEC 5755. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3164 Restriction: Restricted to students within the College of Engineering, Design and Computing

ELEC 4800 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ELEC 4802 - Special Topics (3 Credits)
Prereq: ELEC 3701 with a C- or higher. Restriction: Restricted to undergraduate ELEC students. Cross-listed with ELEC 5802. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: ELEC 3701 with a C- or higher. Restriction: Restricted to undergraduate ELEC students.
Typically Offered: Fall.

ELEC 4840 - Independent Study: ELEC (1-3 Credits)
An opportunity for independent creative work. Prereq: Permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to majors within the College of Engineering, Design and Computing.

Engineering (ENGR)

ENGR 1000 - Introduction to Engineering (1 Credit)
Introduces engineering profession, engineering design and practice; and the tools used by engineers to accomplish design. The specialties within engineering are described. Students are involved in application projects and use word processors, spreadsheets and engineering software. Note: ENGR 1000 cannot be substituted for ELEC 1201. Prereq: High school trigonometry. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

ENGR 1100 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with IWKS 2300 and MECH 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGR 1111 - Psychological and Social Implications of Technology (3 Credits)
This course will explore the impact of technology and its advances on human beings from an emotional, psychological, and social perspective. Discussions will include ethical, moral, and multicultural implications of technological advances from a global perspective and will require students to critically analyze issues that arise from such advances. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to majors with 12 credit hours or less at CU Denver.

ENGR 1130 - Chemistry for Engineers (5 Credits)
An introductory lecture and recitation course designed to meet the general chemistry requirement for engineering students. Topics include atoms, molecules, moles, stoichiometry, chemical bonding, atomic & molecular structures, thermodynamics and kinetics. The course will highlight the application of chemistry to engineering disciplines. Note: Suggested background of one year of high school chemistry or CHEM 1000 and MATH 1110 (or high school equivalent) strongly recommended. Max Hours: 5 Credits.
Grading Basis: Letter Grade

ENGR 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGR 1208 - Special Topics (3 Credits)
Restriction: Restricted to Engineering and pre-engineering students only.
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to Engineering and pre-engineering students only.

ENGR 1218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1238 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 1298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 2298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 3400 - Technology and Culture (3 Credits)
Explores the cultural and political foundations of technology and the impact of technology upon the individual and society. Contributions to technological advances and the impact of technology on women and diverse ethnic groups are examined in the context of specific engineering designs and case studies. (Satisfies the multicultural diversity requirement of the UCDHSC core curriculum). Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

ENGR 3600 - International Dimensions of Technology and Culture (3 Credits)
This course provides students with an understanding of how science, technology and international issues interrelate in a world that has become more interconnected and interdependent. The course will focus on the technical, organizational and cultural aspects of information and other technologies with an emphasis on their impact on third world countries. (Satisfies the international perspectives requirement of the UCDHSC core curriculum). Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

ENGR 3995 - Global Technology, Business & Culture (3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Summer.

ENGR 4150 - Seminar: Special Topics in Engineering (1 Credit)
A flexible seminar format dealing with topics of special interest in engineering. Topics vary from semester to semester. Prereq: Senior standing. Cross-listed with ENGR 5150 and 7150. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to senior standing or higher
Typically Offered: Fall, Spring.

ENGR 4208 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4218 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4228 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4238 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4248 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4258 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4268 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4278 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4288 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4298 - Special Topics (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGR 4800 - Science Engineering and Culture for Undergraduates (3 Credits)
Course for undergraduate international and limited English proficient (LEP) students to improve success in science and engineering degree programs through senior research paper writing , advanced STEM English skills and cross cultural training. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENGR 4840 - Independent Study (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

English (ENGL)

ENGL 1000 - Special Topics (3 Credits)
This topics course at the 1000 level is designed to offer flexibility for the English department for lower division offerings. Students may enroll up to 3 times to total no more than 9 credits but the topics must differ for each course. Repeatable.Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENGL 1010 - Writing Workshop (3 Credits)
Focuses on the abilities and skills needed to write effective expository prose. Emphasizes frequent writing, both in and out of class, with special attention to writing short essays well. Writers learn to write confidently at the sentence and paragraph levels, and to develop their grammatical and mechanical skills. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 1020 - Core Composition I (3 Credits)
Provides opportunities to write for different purposes and audiences, with an emphasis on learning how to respond to various rhetorical situations; improving critical thinking, reading, and writing abilities; understanding various writing processes; and gaining a deeper knowledge of language conventions. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-C01.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-CO1, Communication; Denver Core Requirement, English Composition.
Typically Offered: Fall, Spring, Summer.

ENGL 1021 - Core Composition Workshop (1 Credit)
Prepares students for college-level reading and writing. Students receive one-on-one and small-group instruction on analytical and argumentative writing. Max hours: 1 Credit.
Grading Basis: Letter Grade

ENGL 1050 - Vocabulary for Professionals (3 Credits)
Studies English words derived from Latin and Greek by analyzing their component parts (prefixes, stems, and suffixes). Cross-listed with LATN 1050. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

ENGL 1200 - Introduction to Fiction (3 Credits)
Introduces class members to the works of famous authors as well as to major themes, elements, and techniques of fiction in both short stories and novels. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1400 - Literary Studies (3 Credits)
Helps students develop a sense of literary techniques and issues so they can bring an improved critical sensibility to their reading and writing. Note: Designed for students who are seriously interested in literature. Note: this course assumes that students have completed or are currently taking ENGL 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 1601 - Storytelling: Literature, Film, and Television (3 Credits)
Asks students to explore how stories determine who we are. Everything people do fits into a narrative pattern, evident everywhere from TV news to memory to daily schedules. We tell ourselves stories about ourselves and others--how do these stories shape who we are as cultural beings? Note: this course assumes that students have completed or are currently taking ENGL 1020. Term offered: fall, spring. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH2, Arts Hum: Lit Humanities.
Typically Offered: Fall, Spring.

ENGL 2030 - Core Composition II (3 Credits)
Focuses on academic and other types of research-based writing and builds on the work completed in ENGL 1020. Focuses on critical thinking, reading and writing as well as working with primary and secondary source material to produce a variety of research-based essays. Emphasis on using both print-based and electronic-based information. Prereq: ENGL 1020 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-C02.
Grading Basis: Letter Grade
Prereq: ENGL 1020 with a C- or higher.
Additional Information: GT courses GT Pathways, GT-CO2, Communication; Denver Core Requirement, English Composition.
Typically Offered: Fall, Spring, Summer.

ENGL 2060 - Introduction to Writing & Digital Studies (3 Credits)
Introduces students to the topics of study in the English Writing major. Topics include writing studies (literacy, genre, research, and multimodality), rhetoric (history and theory), and the teaching of writing (pedagogy and practice). Prereq: ENGL 1020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 1020
Typically Offered: Fall, Spring.

ENGL 2070 - Grammar, Rhetoric and Style (3 Credits)
Teaches the basics of English grammar in order to develop a rhetorical and stylistic confidence in reading and writing, using an approach that is more descriptive than prescriptive. Teaches students how to evaluate the grammatical choices of established writers and how to develop flexibility in the grammatical choices they make in their own writing. Note: this course assumes that students have completed ENGL 1020. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 2156 - Introduction to Creative Writing (3 Credits)
Reading, discussing, writing short fiction and poetry in a workshop setting. Note: this course assumes that students have completed ENGL 1020. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall, Spring, Summer.

ENGL 2250 - Introduction to Film (3 Credits)
Introduces students to the critical study of cinema as an art form and a cultural phenomenon. Topics include cinematography, editing, mise-en-scene and sound; the connections between cinema and related art forms; film genres; the social dimensions of film production and reception; and films by such key filmmakers as Alfred Hitchcock, Maya Deren and Spike Lee. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

ENGL 2300 - Topics in Literature and Film (3 Credits)
Courses supplement the regular program of the department, offering such topics as: literary perceptions of motherhood, Asian-American literature, literary classics of science, and contemporary women writers. Note: Can be taken more than once if topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENGL 2390 - Writing the Short Script (3 Credits)
Examines narrative screenwriting elements--premise, theme, conflict, protagonist/antagonist, setting/situation, dialogue, plot structure, imagery--required to create a strong narrative short film. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 2450 - Introduction to Literature and Film (3 Credits)
Provides students with close reading, viewing and analytical skills to explore a variety of literary and visual texts. Introduces discipline-specific genres, methods and terms for assessing literature, cinema, and related art forms through discussion, lectures and writing assignments. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 2510 - Greek and Roman Mythology (3 Credits)
Surveys influential literature from Greece and Rome. Among the Greek works are Homer's epics, Sophocles's tragedies, Plato's and Aristotle's philosophical writings. Among the Roman works are the writings of Vergil, Ovid, the elegists and historians. A brief look at Augustine's writings concludes the course. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 2520 - The Bible as Literature (3 Credits)
Introduces students to biblical literature. Selections from the various genres of writing in Hebrew (history, wisdom, prophecy, literature) are read and discussed, as well as representative sections from the New Testament, including the gospels and the writings of Paul. Cross-listed with RLST 2700. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 2600 - Greatest Hits (3 Credits)
Offers a cultural history of the best-seller over several hundred years, ranging from blockbuster films to popular novels, viral videos, and musical "hits." We will explore popular works in a range of different media, asking how they achieved the status of a best-seller in different cultural settings. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH2, Arts Hum: Lit Humanities.
Typically Offered: Fall, Spring.

ENGL 2840 - Independent Study: ENGL (1-3 Credits)
Term offered: fall, spring. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring.

ENGL 3001 - Critical Writing (3 Credits)
Introduces literary theory to provide extensive practice in writing about literature. Note: Required of English majors and minors with a literature option and education English majors. Prereq: ENGL 2450 with a C- or higher. Restriction: Restricted to English majors only (all ENGL subplans) and Education and Human Development majors with the English (7-12) subplan. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2450 with a C- or higher. Restriction: Restricted to English majors only (all ENGL subplans) and Education and Human Development majors with the English (7-12) subplan.
Typically Offered: Fall, Spring.

ENGL 3020 - Poetry Workshop (3 Credits)
Practical workshop for developing poetic craft, focusing on writing process and specialized topics. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 3050 - Fiction Workshop (3 Credits)
Beginning workshop for defining and developing narrative craft, focusing on writing process and specialized topics. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

ENGL 3070 - Studies in Film History (3 Credits)
Examines the history of cinema from a variety of national perspectives. Topics rotate and may include Silent Era Cinema, Classical Hollywood Film, New Hollywood, French New Wave, German Expressionism, etc. Note: May be taken more than once when topics vary. Prereq: Sophomore standing. Cross-listed with HIST 3070. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3075 - Film Genres (3 Credits)
An intensive study of films of one or more significant genres, such as comedy, film noir, science fiction. Prereq: Sophomore standing. Note: May be taken more than once when genres vary. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3080 - Global Cinema (3 Credits)
Studies topics in international cinema, with particular attention to native production in Latin America, Africa, the Middle East, and Asia. Note: May be taken more than once when topics vary. Prereq: Sophomore standing. Repeatable. Term offered: fall, spring. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3084 - Digital Writing and Storytelling (3 Credits)
Offers students opportunities to examine and compose texts where language is integrated with other media, such as video, still images, music, etc. Includes basic instruction in digital multimedia composition and design tools. ENGL 2070 recommended. Prereq: Junior standing or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 3085 - Film Directors (3 Credits)
An intensive study of the films of one or more major directors, such as Chaplin, Keaton, Hitchcock, Welles, Coen Brothers. Prereq: Sophomore standing. Note: May be taken more than once when directors vary. Term offered: fall, spring. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3106 - Writing for Print Media (3 Credits)
Interested in writing for newspapers, magazines, or new media? Get real-world and practical experience with this introduction to working in modern journalism. Students will work closely with the CU Denver student newspaper "The Sentry", have the chance to get their writing published, and get involved with student media. It's the best way to start writing professionally: with hands-on training. No previous experience necessary--just a passion for journalism and a desire to see your work in print! Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 3154 - Technical Writing (3 Credits)
Introduces students to technical writing through study of and hands-on practice writing texts that communicate complex information, solve problems, and complete tasks. Students write proposals, reports, instructions, memos, documentation, white papers, data visualizations, and web content. Students practice content management, project management, audience engagement, and usability testing. Often, students work with industry and community partners on a technical writing project. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3160 - Language Theory (3 Credits)
Provides a basic introduction to linguistics and language theory, including phonetics, grammar, semantics, pragmatics, sociolinguistics, cognitive processing, and language acquisition. Includes practical applications of the theories and methodologies presented. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3170 - Business Writing (3 Credits)
Focuses on the strategies and techniques of business writing, with emphasis on reader, message and form. ENGL 2070 recommended. Prereq: Sophomore standing. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

ENGL 3180 - Writing in the Social Sciences (3 Credits)
Teaches students to analyze and produce types of writing common to the sub-disciplines of the social sciences. Emphasizes the dialogic nature of academic writing, and thus foregrounds the importance of understanding, evaluating, and responding to existing scholarship. Prereq: ENGL 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030

ENGL 3190 - Writing Center Theory & Practice (3 Credits)
An introduction to writing centers and to theories of composition, education, and writing pedagogy with a focus on collaborative learning practices and the dynamics of the consulting relationship. Students will have opportunities to research, observe, and engage in the teaching practices of the Writing Center at CU Denver. Prereq: ENGL 2030 with a B or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a B or higher

ENGL 3200 - From Literature to Film (3 Credits)
Explores the relationship between literature and cinema; the process of adapting and transforming a novel into a feature-length film; and the historical, cultural, and commercial influences that shaped the creation of each novel and film studied. Prereq: Sophomore standing. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Summer.

ENGL 3300 - Topics in Film (3 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy. Prereq: Sophomore standing. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3301 - Topics in Film: Am. Lit (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3302 - Topics in Film: Before 1650 (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy, before 1650. Note: Open to both majors and nonmajors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3303 - Topics in Film: 1650-1900 (3-9 Credits)
Courses supplement the department's regular course offerings. Recent topics have included women and film, movies as history and film comedy, from 1650 to 1900. Note: Open to both majors and nonmajors. Can be taken more than once when topics vary. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3330 - Topics in Literature (3 Credits)
Courses supplement the department's regular course offerings. Recent topics have included Tolkien and international short stories. Prereq: Sophomore standing. Note: Open to both majors and non-majors. Can be taken more than once when topics vary. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3331 - Topics in Literature: Am Lit (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or works of major authors. Prereq: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3332 - Topics in Literature: Before 1650 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors before 1650. Restriction: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3333 - Topics in Literature: 1650-1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors from 1650-1900. Restriction: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3334 - Topics in Literature: After 1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/ or works of major authors after 1900, e.g., Lit. of the City, Detective Lit., Science Fiction, Memoir. Prereq: Sophomore standing or higher. Repeatable. Term offered: fall, spring. Max hours: 15 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3405 - Topics in Writing (3 Credits)
Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

ENGL 3415 - Screenwriting Workshop (3 Credits)
Continues and expands ENGL 2415. The course combines analytical discussion of film screenplays with a writing worksop format. By the end of ENGL 3415, students have completed the first two acts of a feature-length screenplay. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 3416 - Magazine Writing (3 Credits)
An intensive, practical course in writing non-fiction with an emphasis on journalistic approaches for daily, weekly, and monthly publications. Prereq or Coreq: ENGL 2030. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ENGL 2030
Typically Offered: Spring, Summer.

ENGL 3417 - Writing for the Mass Media (3 Credits)
Students will examine public relations writing techniques and journalistic style, public relations theory and ethics, and practical client work. Note: this course assumes that students have completed ENGL 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 3450 - Contemporary Women Writers (3 Credits)
Examines how women write about a specific theme, such as home, work, family, the "Other," as well as how women's writing may differ from men's. Theme and genre vary. Prereq: Sophomore standing. Cross-listed with WGST 3450. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3480 - Modern Drama (3 Credits)
How does drama change from the pioneering realism of Ibsen and Chekhov to the Absurdism of Ionesco and Pinter and beyond? The course covers plays in English and translation from the late nineteenth to the twenty-first century, with attention to performance as well as literary texts. Prereq: Sophomore standing. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 3520 - Religious Narratives (3 Credits)
Investigates the language and structure of religious discourse in Western literature. Welcomes interdisciplinary and comparative perspectives with a focus on cultural constructions of the sacred. Prereq: Sophomore standing. Cross-listed with RLST 3720. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 3661 - Shakespeare (3 Credits)
Introduces some of Shakespeare's major plays and poems, which usually includes Richard II, Romeo and Juliet, Measure for Measure, Othello, King Lear, Anthony and Cleopatra and The Tempest. Prereq: Sophomore standing. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3700 - American Literature to the Civil War (3 Credits)
Surveys American literature from the colonial era to the Civil War. Note: this course assumes that students have completed ENGL 1020. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 3750 - American Literature after the Civil War (3 Credits)
Surveys American literature from the Civil War to the contemporary era. Note: this course assumes that students have completed ENGL 1020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 3795 - Race and Ethnicity in American Literature (3 Credits)
Focuses alternately on one of several ethnic American literary traditions (e.g. African American, Chicano) and their historical, geographical, social and economic communities. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

ENGL 3798 - International Perspectives in Literature and Film (3 Credits)
Fosters an understanding of peoples outside of the U.S. through the study and appreciation of non-western literature. Investigates how historical, cultural, and ideological forces constitute race, ethnicity, nationalism, and alienation in a single country or across a region. Topic and country/region varies by semester. Note: May be repeated for credit when title and content are different. All texts in English translation. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

ENGL 3840 - Independent Study: ENGL (1-3 Credits)
Prereq: Sophomore standing. Department consent required. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 3939 - Internship (1-6 Credits)
Employment situations designed and supervised by members of the faculty; concepts and skills developed in the classroom are used in business and public service contexts. Prereq: Junior standing or higher. Before enrolling, students should contact the Career Center. Note: Up to six hours may be counted toward the major. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

ENGL 4000 - Studies of Major Authors (3 Credits)
An intensive study of works of one major British or American author. Examples: Dickens, Woolf or James. Prereq: Sophomore standing. Cross-listed with ENGL 5000. Term offered: fall, spring. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4001 - Major Authors: Am. Lit (3-15 Credits)
An intensive study of works of one major American author, e.g. Hawthorne. Faulkner, Cather. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4002 - Major Authors: Before 1650 (3-15 Credits)
An intensive study of works of one major British or American author, before 1650, e.g., Gawain-poet. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4003 - Major Authors: 1650-1900 (3-15 Credits)
An intensive study of works of one major British or American author, between 1650-1900, e.g., Austen, Shelley, Dickens. Prereq: Sophomore standing or higher. Term offered: fall, spring. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4004 - Major Authors: After 1900 (1-15 Credits)
An intensive study of works of one major author, after 1900, e.g. Nobel Laureates, Cather, Joyce. Prereq: sophomore standing or higher. Term offered: fall, spring. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4025 - Advanced Poetry Workshop (3 Credits)
Advanced poetic craft, including exercises in mode, genre and advanced revision. Prereq: ENGL 3020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3020
Typically Offered: Spring.

ENGL 4055 - Advanced Fiction Workshop (3 Credits)
Advanced workshop for developing and deepening narrative craft, focusing on writing process and specialized topics. Prereq: ENGL 3050, English major and minor only; all others must obtain permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3050. Restriction: English majors and minors only.
Typically Offered: Fall, Spring.

ENGL 4088 - Literary Editing: Copper Nickel (3 Credits)
Literary editing in theory and practice, using UCD's nationally recognized journal "Copper Nickel." Topics may include evaluating fiction, poetry and nonfiction; design and aesthetics; line editing; the business of literary journals. Prereq: ENGL 3020 or 3050. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 3020 or ENGL 3050
Typically Offered: Spring.

ENGL 4160 - Poetics (3 Credits)
"Mechanics" of poetry in English, including meter, rhythm, rhyme, line, and other systems of measurement and logic. Emphasis is on historical development of poetic art in English. Note: this course assumes that students have completed ENGL 2450. Cross-listed with ENGL 5160. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4166 - History of American Poetry (3 Credits)
Examines major American poets and poetic trends from the colonial period to the present, with attention to cultural contexts and to development of distinctively American practices. Prereq: Sophomore standing. Cross-listed with ENGL 5166. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Teikyo.
Typically Offered: Fall, Spring.

ENGL 4175 - Writing in the Sciences (3 Credits)
Provides rhetorical analyses of scientific discourse and student practice in writing research reports and proposals. Prereq: Sophomore or higher standing and ENGL 2030 with a C- or higher. Cross-listed with ENGL 5175. Students will not receive credit for this class if they have already received credit for ENGL 3175. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a C- or higher Restriction: Restricted to sophomore or higher standing
Typically Offered: Fall, Spring.

ENGL 4177 - Technical Editing (3 Credits)
Provides instruction in the conventions of editing in the genre of technical communication. Students develop skills they can use to edit a variety of technical documents. Prereq: ENGL 2030 with a C- or better. Cross-listed with ENGL 5177. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030 with a C- or higher
Typically Offered: Spring.

ENGL 4180 - Argumentation and Logic (3 Credits)
Explores the history of logic and its role in argumentation, studies various types of logical structures, and analyzes current uses of argumentation, with attention to writing arguments on current public issues. ENGL 3084 recommended. Prereq: Students must have junior standing/60 units of credit completed. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 4190 - Advanced Topics in Writing, Rhetoric, & Linguistics (3 Credits)
Focuses on particular issues in rhetoric and writing as they pertain to reading and writing, including language and gender, language and culture, and language of political action. ENGL 3084 recommended. Prereq: Must have completed 60 semester hours. Cross-listed with ENGL 5190. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher
Typically Offered: Fall, Spring, Summer.

ENGL 4200 - Survey of the English Novel to 1900 (3 Credits)
Rise and development of the English novel from its beginnings in the 18th century through the end of the 19th century, including such writers as Defore, Fielding, Austen, Shelley, the Brontes, Thackeray, and Dickens. Prereq: Sophomore standing. Cross-listed with ENGL 5200. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4210 - History of the English Novel II (3 Credits)
Overview of the English novel from mid-19th century to World War II, emphasizing the important developments which the form underwent in the hands of notable novelists, including Charles Dickens, the Brontes, George Eliot, Henry James, Joseph Conrad, D.H. Lawrence and Virginia Woolf. Prereq: Sophomore standing. Cross-listed with ENGL 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4220 - African-American Literature (3 Credits)
Surveys African-American literature with special emphasis on post-Civil War writing. Prereq: Sophomore standing. Cross-listed with ENGL 5220, ETST 4220 and ETST 5220. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4230 - The American Novel (3 Credits)
Surveys major developments in the American novel from the 18th century to the 21st century. Prereq: Sophomore standing. Cross-listed with ENGL 5230. Term offered: spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring, Summer.

ENGL 4235 - Faulkner (3 Credits)
Studies the works of Faulkner's high period with special attention to southern themes and Faulkner's experimentation with narrative form. Prereq: Sophomore standing. Cross-listed with ENGL 5235. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4236 - The American Short Story (3 Credits)
Traces the development of the short story in the United States, from its beginnings in colonial tales to its contemporary renaissance as a dominant literary form. Prereq: Sophomore standing. Cross-listed with ENGL 5236. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Teikyo.
Typically Offered: Fall.

ENGL 4240 - Topics in Contemporary American Literature (3 Credits)
Seminar focusing on a segment of contemporary American literature. Prereq: Sophomore standing. Cross-listed with ENGL 5240. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4250 - Twentieth Century Fiction (3 Credits)
Deals with novels originating in a variety of countries in an effort to see the similarities and differences that varying nationalities bring to the genre. Prereq: Sophomore standing. Cross-listed with ENGL 5250. Term offered: spring. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4280 - Proposal and Grant Writing (3 Credits)
Students learn how to find funding sources, write proposals, and manage grants for nonprofit, research, and industry contexts. Students practice the entire process of proposal and grant writing: 1) describing the problem in context; 2) identifying sponsors, building relationships, and finding a match;3) designing, writing, revising, and completing all proposal components; 4)conceptualizing and using persuasive visual and design elements; 5)responding to sponsors and managing grant funds. Often, students work with academic, industry, and community partners on a grant writing project. ENGL 3084 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5280. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ENGL 4290 - Rhetoric and the Body (3 Credits)
Investigates the relationship between rhetoric and the body, with attention to theoretical and practical implications. Welcomes interdisciplinary perspectives, and often considers rhetorical topics from historical, medical, disability studies, economic, and/or gendered perspectives. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 4300 - History of British Drama (3 Credits)
Intended as a survey of British drama from the miracle plays of the medieval period, through the Renaissance and Restoration, to the "kitchen sink" realists of the 1960s. Prereq: Sophomore standing. Cross-listed with ENGL 5300. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 5306, HIST 4306, 5306, WGST 4306, 5306. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 5308, PHIL 4308, PHIL 5308, WGST 4308, WGST 5308. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 4400 - Old English I (3 Credits)
Instruction in the Old English language. Note: this course assumes that students have completed ENGL 2070 or one year of college level coursework in a foreign language. Prereq: Sophomore standing. One year of college foreign language or ENGL 2070 recommended. Cross-listed with ENGL 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4410 - Old English II: Beowulf (3 Credits)
Continuing training in the reading of Old English and intensive reading of Beowulf. Cross-listed with ENGL 5410. Note: this course assumes that students have completed ENGL 4400 or 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENGL 4420 - Film Theory and Criticism (3 Credits)
(1) Familiarizes students with some of the central concepts and debates in film theory and criticism, both classic and contemporary, (2) enables students to develop advanced analytic and interpretive skills, and (3) guides students toward discovering and articulating original critical and theoretical perspectives. Note: this course assumes that students have completed ENGL 2250, ENGL 3070, ENGL 3080. Cross-listed with ENGL 5420. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENGL 4460 - Contemporary World Literature (3 Credits)
Surveys literature written by world writers since World War II. Prereq: Sophomore standing. Note: Texts read in English. Cross-listed with ENGL 5460. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4500 - Medieval Literature (3 Credits)
Introduces representative writers from the Norman Conquest to about 1550. Emphasis on a variety of genres, including religious poetry, Arthurian romance, dream vision and drama. Prereq: Sophomore standing. Cross-listed with ENGL 5500. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4510 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. Note: this course assumes that students have completed at least 9 hours of literature coursework. Cross-listed with ENGL 5510, RLST 4730/5730, WGST 4510/5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENGL 4520 - English Renaissance (3 Credits)
Introduces some of the important writers in this major period of English literature (1500-1660). Special attention to the works of Sidney, Milton, Spenser, Shakespeare, Donne, Herbert and Johnson. Prereq: Sophomore standing. Cross-listed with ENGL 5520. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4530 - Milton (3 Credits)
Extensive reading in John Milton's poetry (Lycidas, Paradise Lost, Paradise Regained, Samson Agonistes) as well as his political, social and theological writings. Prereq: Sophomore standing. Cross-listed with ENGL 5530. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4540 - Restoration and the 18th Century (3 Credits)
Introduces some of the important writers of the "Age of Reason." Emphasis on such figures as Bunyan, Burke, Dryden, Johnson, Pope and Swift. Prereq: Sophomore standing. Cross-listed with ENGL 5540. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4560 - English Romanticism (3 Credits)
Studies major works of the chief English writers of the first part of the 19th century, with emphasis on such representative figures as Wollstonecraft, Godwin, Blake, Wordsworth, Coleridge, Hazlitt, Byron, Keats and Shelley. Prereq: Sophomore standing. Cross-listed with ENGL 5560. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4580 - The Victorian Age (3 Credits)
Examines the main currents of Victorian thought in prose and poetry from about 1830 to the end of the century, including such writers as Browning, Carlyle, Mill, Newman, Ruskin, Swinburne and Tennyson. Prereq: Sophomore standing. Cross-listed with ENGL 5580. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4600 - Modernism (3 Credits)
Modernist literature from the beginning of the 20th century through World War II, including such writers as Eliot, Joyce, Forester, Ford, Yeats, Woolf and Barnes. Examines the social-political influences as well as the aesthetic and stylistic elements which define modernist writing. Prereq: Sophomore standing. Cross-listed with ENGL 5600. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4601 - Teaching English Language Learners: Theory and Practice (3 Credits)
Overview of basic principles and practices in the learning and teaching of English as a second language. ENGL 3160 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5601. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

ENGL 4610 - Narrative: Form and Theory (3 Credits)
A critical and theoretical exploration of the elements of narrative -e.g., plot, character, dialogue, discourse-in literature and film. This course is especially useful for fiction-writing students in the Creative Writing Track. Prereq: ENGL 2450. Cross-listed with ENGL 5610. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2450
Typically Offered: Fall.

ENGL 4651 - Second Language Writing (3 Credits)
Topics include: similarities between first & second language writing, the processes of composition & revision, teacher response to student writing, student processing of feedback, writing assessment, and the reading/writing connection. ENGL 3160 recommended. Prereq: Students must have junior standing/60 units of credit completed. Cross-listed with ENGL 5651. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ENGL 4701 - Multimedia in the Community (3 Credits)
Produce dossier-quality multimedia shorts by researching and writing digital compositions for selected community organizations. Topics for research range across numerous social issues and involve all disciplines. Prereq: ENGL 2030, 3154, and 3170 with a C- or higher or permission of instructor. Cross-listed with ENGL 5701. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 2030, 3154, and 3170 with a C- or higher.

ENGL 4720 - Honors in English (3 Credits)
Designed for students taking departmental honors in English. Prereq: Students must have written permission from the honors advisor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4730 - Chaucer (3 Credits)
Extensive reading in Chaucer's works in Middle English, including his lyrics, dream visions, Troilus and Criseyde, and the Canterbury Tales. Examines sources, historical and ideological factors influencing the texts. Prereq: Sophomore standing. Cross-listed with ENGL 5730. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

ENGL 4740 - Honors in Writing (3 Credits)
Designed for students taking departmental honors in English writing. Prereq: Student must have written permission from honors director and faculty advisor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENGL 4745 - Humanistic Writing About Medicine and Biology (3 Credits)
Investigates medical and biological writing over the last two centuries with an emphasis on reception, ethical issues, and the differences between professional and popular writing. Prereq: Sophomore standing. Cross-listed with ENGL 5745. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

ENGL 4755 - Illness & Disability Narrative (3 Credits)
Narratives of mental, chronic or terminal illness, and disability have become common over the past decades. There are a number of ways in which these stories are told by those reflecting on their experiences: individuals choosing to tell such stories must consider how their stories will be received and what they are revealing about themselves in dealing with their conditions. Many issues arise when looking at the production and reception of these narratives, including acceptation and assimilation, stigmatization, access and quality of treatment, discrimination, accommodation, pity and stereotyping responses. These narratives are consumed, usurped, and reacted to by clinicians, communities and society at large with their own agendas, expectations, fears and judgments of the stories and of the individuals telling their stories. This course is about the issues and concerns of producing an illness or disability narrative and the consumption/reception of those narratives by health professionals, communities, and society at large. Prereq: ENGL 1020 and 2030 with a C or higher. In addition, English majors are required to have taken ENGL 3001, 3084, or 4701, and HEHM minors using this as their capstone are required to have taken HEHM 3100 with a C or higher. Cross-listed with ENGL 5755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre-req ENGL 1020 and 2030 with a C or higher. In addition, English majors are required to have taken ENGL 3001, 3084, or 4701, and HEHM minors using this as their capstone are required to have taken HEHM 3100 with a C or higher.

ENGL 4770 - Topics in English: Film and Literature (3 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing. Cross-listed with ENGL 5770. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4771 - Topics in English Film and Lit: Film (3 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing or higher. Term offered: fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.
Typically Offered: Fall.

ENGL 4772 - Topics in English Film and Lit: Lit (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4773 - Topics in English Film and Lit: Am. Lit (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in American literature and/or film. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max Hours: 12 Credits
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4774 - Topics in English Film and Lit: Before 1650 (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film before 1650. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4775 - Topics in English Film and Lit: 1650-1900 (3-12 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film from 1650-1900. Prereq: Sophomore standing or higher. Term offered: spring, fall. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

ENGL 4776 - Topics in English: Film and Lit: After 1900 (1-15 Credits)
May look at specific genres, aesthetic approaches to literature, ideological or socio-political agendas, or other special topics in literature and/or film after 1900, e.g., Philosophy and Lit., Mental Health in Lit., Environmental Lit. Prereq: Sophomore standing or higher. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Restriction: Sophomore standing or higher.

ENGL 4800 - Special Topics in Creative Writing (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics may include projects in a specialized genre, such as science fiction or noir writing, or in a field of professional endeavor related to creative writing, such as the editing and production of a literary journal. Note: this course assumes that students have completed ENGL 2154. Term offered: fall. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4801 - Special Topics in Creative Writing: Poetry (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics will include projects in poetry. Note: this course assumes that students have completed ENGL 2156. Term offered: fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4802 - Special Topics in Creative Writing: Fiction (3 Credits)
Writing-intensive courses combining reading, directed writing, peer- and instructor-led workshops in a topic to be determined by instructor. Topics will include projects in fiction. Note: this course assumes that students have completed ENGL 2154. Term offered: fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ENGL 4810 - Literary Editing Practicum (3 Credits)
Practicum for students interested in editing in a literary field, e.g., literary magazines, book manuscripts, anthology projects. Each semester the parameter of the practicum will be set by the instructor. Prereq: English majors and minors. All other students must have instructor's permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to ENGL majors or minors

ENGL 4820 - Senior Poetry Workshop (3 Credits)
Capstone workshop for students within the Creative Writing major track or Creative Writing minor. Emphasis on a single, sustained project developed by the student. Prereq: ENGL 4025. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 4025
Typically Offered: Spring.

ENGL 4840 - Independent Study: ENGL (1-3 Credits)
Department consent required. Term offered: fall, spring. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring.

ENGL 4850 - Senior Fiction Workshop (3 Credits)
Capstone workshop designed to deepen the understanding of narrative, and consciously apply the strategies of narrative craft to modern markets. Course will focus on the writing and publishing processes, culminating in a classroom narrative defense and submission to professional outlets. Prereq: ENGL 4055. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGL 4055
Typically Offered: Spring.

ENGL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

ENGL 4920 - Directed Readings (3-6 Credits)
Explores an area of English literature not covered in regular course work. Note: May be taken as a precursor to honors essay, in which case student should consult with the honors advisor. Prereq: Senior standing. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.

ENGL 4990 - Senior Writing Project in Creative Writing or Film Studies (3 Credits)
Individual writing project consisting of a creative manuscript or critical study. Manuscript must be 30 pages of high quality text. Note: Available only to students in the creative writing and film tracks. Prereq: Senior standing. Department consent required. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

ENGL 4995 - Senior Writing Project (3 Credits)
Individual writing project in any genre and any discipline upon approval of faculty advisor. Manuscript must be 30 pages of high quality text. Prereq: Senior standing. Department consent required. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Senior standing.
Typically Offered: Fall, Spring.

Entrepreneurship (ENTP)

ENTP 1001 - Business Bound (1 Credit)
Junior Achievement and the Jake Jabs Center for Entrepreneurship offer this summer camp experience for high school students. Students will earn 1 college credit hour while learning what it takes to be an entrepreneur. They'll hear from some of the most successful entrepreneurs and business leaders from across the state as they consider a path for their future. The week will culminate with a competition where one team will be crowned the JA Titan of Business. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory
Typically Offered: Summer.

ENTP 3200 - Essentials in Entrepreneurship (3 Credits)
This course provides an introduction to, and an overview of, the fundamentals of entrepreneurship. Whether you already have an idea and are eager to start your own business, or simply want to learn more about what an entrepreneurial career in a dynamic startup eco-system (like Denver) would be like, this course exposes you to the joys and challenges of entrepreneurship—from conceptualizing new ventures to developing, marketing, vetting, pitching, funding, and managing them. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ENTP 3201 - Lean Startup Fundamentals (3 Credits)
Get to know the Lean Startup method, an emerging paradigm for developing and launching new businesses and products. This methodology focuses on experimentation, customer feedback, and iterative design to increase a venture's competitive advantage and chances of success. Course topics include the Lean Startup method's history and benefits, as well as how to test hypotheses, collect data, create a minimal viable product, accelerate growth, pivot, and more. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENTP 3210 - Visionary Leadership for New Ventures (3 Credits)
This course provides students with an overview of key leadership principles for creating strategy and managing teams in a startup environment. It introduces leadership concepts critical to gaining true organizational commitment and focuses on case studies relevant to common business issues. By exploring what entrepreneurial leaders actually do and how visionary leadership is required to grow a venture, students will learn how to execute these concepts through measurable goals and objectives. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

ENTP 3230 - Small Business Accounting and Finance (3 Credits)
This course covers key financial topics such as financial reporting, cash flow analysis, financial planning, budgeting, working capital management, asset decisions, obtaining capital, business valuation, source of funds for raising capital, franchising, and other topics relevant to entrepreneurial finance. This course counts as a pre-req to ENTP#3299. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENTP 3240 - Developing Dynamic Concepts (3 Credits)
This course is designed to prepare entrepreneurial-minded students to critically and objectively evaluate the feasibility of their ideas. Entrepreneurs are motivated by plethora of "the next big idea" and are often fatally optimistic about their ideas. The course work will demonstrate how to objectively test and validate the feasibility of an entrepreneurial idea through data-driven analytical and strategic planning. Additionally, this course will provide pragmatic applications of the course content by incorporating real-life case studies presented by practicing entrepreneurs as guest lecturers. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 3260 - High Impact Sales for Entrepreneurs (3 Credits)
If you want to have a successful business, selling is non-negotiable. The purpose of this course is to demystify sales and help you understand strategies and tactics for effective selling in both pre-revenue and post-revenue entrepreneurial environments. The course empowers you to learn effective selling through knowledge, skill, and discipline and thereby master the art of conversion. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENTP 3299 - Business Model Development & Planning (3 Credits)
At the heart of every great business is a well thought-out business plan. This course teaches entrepreneurially-minded students how to create one, and students will tackle this project with a team or as an individual. Local entrepreneurs and investors will serve as guest speakers and share their experiences. Mentors and advisors associated with the Jake Jabs Center, as well as special Center-organized experiential events, will provide students with practical feedback. Prereq: ENTP 3230 or ACCT 2200 with a grade of C- or higher is required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3230 or ACCT 2200 with a grade of C- or higher is required.
Typically Offered: Spring.

ENTP 3900 - Experiential Topics in Entrepreneurship (3 Credits)
In Colorado's thriving entrepreneurial ecosystem, aspiring entrepreneurs need guidance, inspiration, networks, experiential events, and practice before launching a successful startup. This course will help you cultivate an entrepreneurial mindset and skillset that will not only empower you to create your own business but also stand out as a desirable job candidate to Colorado's many innovative companies. Learn from today's leading, most disruptive founders as you hear their stories and visit their businesses, and then develop your own idea with a team of your peers. Typically offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4028 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Students can register for ENTP 4028 twice as long as they are for two different trips (for example: Cuba and Barcelona). Cross-listed with ENTP 6028, INTB 4028, and INTB 6028. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Global Education Study Abroad.
Typically Offered: Spring, Summer.

ENTP 4200 - Mission Driven Entrepreneurial Mindset (3 Credits)
The course is designed to teach students to rethink the common market driven approach to innovation, with a mission driven focus. In this course, students will learn that impact innovation exists in the public, private and non-profit sectors. Completing this course will dispel the idea that purpose driven innovation only exists in the non-profit realm. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4840 - Entrepreneurship Independent Study (1-3 Credits)
This course is intended for research or other unique circumstances. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENTP 4950 - Special Topics (3 Credits)
A variety of topics in entrepreneurship are offered. Consult the current "Schedule Planner" for semester offerings. Prereq: Topics vary.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Environmental Sciences (ENVS)

ENVS 1044 - Introduction to Environmental Sciences (3 Credits)
This survey course develops a basic understanding of ecological relationships and environmental systems. Issues such as the effects of human activities on earth's environment, extinction or diversity, greenhouse effect, hazardous or toxic wastes and human population growth are discussed. Students must also take the accompanying laboratory ENVS 1045. No co-credit with ENVS 1042. Prereq or Coreq: ENVS 1045. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or co-req: ENVS 1045
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

ENVS 1045 - Introduction to Environmental Sciences Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in environmental science. Students must also take the accompanying lecture ENVS 1044. No co-credit with ENVS 1042. Prereq or Coreq: ENVS 1044. Term offered: fall, spring, summer. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: ENVS 1044
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

ENVS 1342 - Environment, Society and Sustainability (3 Credits)
Overview of perspectives on environmental issues within the context of sustainable development and taking a systems approach. The focus is on social science approaches to explore the human footprint on the earth, environmentalism, scientific uncertainty, policy creation and social change. Note: This course is a prerequisite for GEOG 4680 Urban Sustainability: Perspectives and Practice. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography.
Typically Offered: Fall, Spring, Summer.

ENVS 2939 - Internship (3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

ENVS 3082 - Energy and the Environment (3 Credits)
For students of various backgrounds who wish to increase their understanding of the environmental and technical issues of supplying the energy demands of our society. Alternative energy sources and conservation are explored as solutions to promote a sustainable society. Note: One college-level science course and MATH 1110 or equivalent are strongly recommended as preparation for optimal student success. Cross-listed with PHYS 3082. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 3232 - Weather and Climate (3 Credits)
Introduces the processes and systems that govern both day-to-day weather and longer-term climate variations. Covers instrumentation and weather forecasting techniques. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with GEOG 3232. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

ENVS 3500 - Topics in Environmental Sciences (1-6 Credits)
Note: Topics may vary from one offering to the next. Repeatable.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ENVS 4380 - Anthropocene Futures (3 Credits)
We are living in the "Anthropocene"—an era of rapid environmental and societal changes, and of decline and loss resulting from accelerating human interactions with Earth systems. Warming climates, wildfires, floods, water and food insecurity, novel ecosystems, and even pandemics such as COVID-19, are phenomena of the Anthropocene. With a still growing human population and a finite planet, understanding and overcoming such challenges is more pressing than ever, if people are to co-evolve with Earth toward a sustainable future. This interdisciplinary seminar course tells the scientific story of humanity's intensifying interactions with the planet and explores possible future paths. Through presentations, readings and discussion, students will examine topics that include the origin and significance of Anthropocene in Earth's evolutionary history, the debates and evidences for a new geologic epoch, large-scale trajectories of environmental change, a safe operating space, and planting seeds for a "good" Anthropocene. In doing so, students will acquire skills and experiences in critical thinking and analytical reasoning to grapple with many uncertainties and tensions of the Anthropocene. Cross-listed with GEOG 4380, GEOG 5380, and ENVS 5380. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 4500 - Topics In Environmental Sciences (1-6 Credits)
Note: Topics may vary from one offering to the next. Note: Necessary prior coursework varies according to the topic. Students should consult with the instructor. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4650 - Environmental Education (3 Credits)
This course links the theory and practice of environmental education to inform curricular development and pedagogical knowledge. Cross-listed with ENVS 5650 and SCED 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade

ENVS 4720 - Climate Change: Causes, Impacts and Solutions (3 Credits)
Examines science behind past, present & future climate change & environmental, social & political implications & solutions. Explores recent scientific research, syntheses & mainstream literature advancing knowledge about causes & consequences of natural & anthropogenic climate change. Prereq: GEOG 3232 with a C- or higher. Cross-listed with GEOG 4720/ GEOG 5720/ ENVS 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.

ENVS 4740 - Soil Science and Geography (3 Credits)
Reviews chemical and physical properties of soils, soil development, and geographic distributions of soil types in the context of the role that soils play in natural and human-altered ecosystems. Cross-listed with GEOG 4740, GEOG 5740, ENVS 5740. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ENVS 4750 - Beeography: Geography of Bees (4 Credits)
Beeography is an introduction to the bee world and the amazing diversity in Colorado and beyond. The course will examine the distribution of bees and the pressures they face in different environmental and cultural contexts. It will examine different methods to support and increase bee populations and pollination services, especially in populated environments, including backyard beekeeping of honeybee and native bee populations. Field and lab activities will include beekeeping, native bee collection and identification, bee dissections, pollen processing and identification, and trips to area bee museum collections and apiaries. Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with GEOG 4750, GEOG 5750, and ENVS 5750. Term offered: summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Summer.

ENVS 4757 - Urban Climate and Air Quality (3 Credits)
Explores how people alter climates on micro- to regional scales, and how this in turn affects human health and society. Focusses on recent scientific research, physical processes within cities, and the role of urbanization in global climate change. Cross-listed with GEOG 4757, GEOG 5757, ENVS 4757, and ENVS 5757. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ENVS 4780 - Aquatic Ecology (3 Credits)
This course explores the physical, chemical, and biological (including human) properties of aquatic ecosystems, and how the interrelationships between these properties define and influence advanced ecological processes. Special focus is given to lakes, reservoirs, wetlands, streams, rivers, and groundwater. Learning is facilitated through lectures, discussions, student presentations, laboratory and data exercises, and periodic (often virtual) field excursions. Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher. Cross-listed with ENVS 5780, BIOL 4780, and BIOL 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) with a C- or higher.

ENVS 4840 - Independent Study: ENVS (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

ENVS 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Ethnic Studies (ETST)

ETST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

ETST 2000 - Introduction to Ethnic Studies (3 Credits)
Multi-disciplinary survey of contemporary and historical research analyses of the diverse social, economic, political, and cultural facets of African American, American Indian, Asian American, and Latino communities and cultures. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring.

ETST 2024 - Race and Ethnic Relations (3 Credits)
Surveys race and ethnicity, facts and myths about great populations, and the social and cultural sources of bias and discrimination. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 2108 - Introduction to Chicanx and Latinx Studies (3 Credits)
This course introduces students to the broad range of the interdisciplinary fields of Chicanx and Latinx Studies by examining the Chicanx and Latinx experience including history, identity, politics, immigration, labor, literature, and popular culture. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Spring.

ETST 2155 - African American History (3 Credits)
Surveys the history of African Americans. Study interpretations, and analysis of major problems, issues, and trends affecting the African American population from pre-slavery to the present. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

ETST 2357 - Asian American & Pacific Islander Cultures (3 Credits)
This is an introductory course that will examine how Asian Americans and Pacific Islanders have been represented in American popular culture and how Asian Americans and Pacific Islanders have sought to challenge and complicate those dominant cultural images to define themselves and their diverse experiences. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

ETST 2400 - Issues in Chicano/a Education (3 Credits)
Historical overview of segregation, landmark court cases and immigration policy in the education of Chicano/as in Colorado and nationally from 1920 to the present. The intersection of these issues in the education of undocumented students is also examined. Cross-listed with TCED 2400. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3002 - Ethnicity, Health and Social Justice (3 Credits)
Surveys core issues contributing to racial or ethnic minority differences in health status. Historical and contemporary U.S. health and social policy, including the areas of environmental health, sexual and reproductive health, children and immigrants, are examined. Cross-listed with PBHL 3002. Term offered: fall. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall.

ETST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with HIST 3003, INTS 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ETST 3036 - American Indian Cultural Images (3 Credits)
Analysis of images and perceptions of American Indians in American culture, as seen in politics, education, film, photography, advertising, art, literature and the media. Note: Students may not earn credit for this course if they have earned credit for ETST 2036. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Summer.

ETST 3060 - AAPI Communities and Health (3 Credits)
Surveys core issues shaping health experiences and health status of Asian American and Pacific Islander communities in the United States. Historical and contemporary U.S. health and social policies that have directly impacted AAPI health and well-being in the United States are examined. Students will also engage with community leaders and partners committed to AAPI communities. Cross-listed with PBHL 3060. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3108 - Chicano/a and Latino/a History (3 Credits)
An historical analysis of person's descendant from Mexico and Latin America. Areas of focus include ethnohistorical backgrounds, current interrelations, and social movements in both rural and urban groups. Other topics include: cultural patterns, identity maintenance, social reforms and problems of national incorporation. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3110 - Indigenous Studies (3 Credits)
Examines how communities in diverse world regions preserve tradition, share knowledge, and respond to influences both within and outside of their immediate environments. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

ETST 3125 - Multiracial Families and Communities (3 Credits)
Examines specific issues related to multiracial, multicultural and mixed heritage families in the U.S., including historical, sociocultural, economic and political factors involved. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3129 - Contemporary Latin American Literature (3 Credits)
The best of contemporary Latin American novels. Examines how U.S. policies in Latin America affect literary creation. Note: Taught in English. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3155 - The African Diaspora (3 Credits)
This course examines historical and contemporary experiences of Africans and people of African descent in various parts of the world – with a special focus on African immigrants in the US, Black Americans with generational roots in the USA, Blacks in Europe and Afro-Latin Americans. The course incorporates perspectives from history, literature, religious studies, visual art, political science, sociology and anthropology in an effort to provide a range of materials that address the diversity and complexity of the experiences of Africans and people of African descent. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3211 - Hip Hop Music & Culture (3 Credits)
Covers the historical trajectory of hip hop music and culture from inception, aims to restructure stereotypes and offer a deeper perspective into how hip hop defines the identities of individuals as well as the consciousness of the masses within society. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3230 - African American Family (3 Credits)
Exploration of the African American family social institution. Emphasis on historical roots and African influence is still enmeshed in the functioning of the family in modern society. Factors responsible for the ability of the family to meet the challenging society. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3272 - Global Media (3 Credits)
Introduction to leading issues in the study of transnational media. The course will focus on the global media environment in the early 21st century, diverse countries, a variety of media, and social issues. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

ETST 3274 - Power, Poverty, Culture (3 Credits)
Studies the process that has rendered certain groups poor for generations. Studies African Americans, Whites, Chicanos/as and Latinos/as, and other ethnic groups that have lived in this society in a state of poverty. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 3297 - Social History of Asian Americans (3 Credits)
Introductory-level course surveys the social history of Asian American groups from the mid-19th century to the present. Examines immigration patterns, the development of communities, social and economic problems, and anti-Asian movements and activities. Cross-listed with HIST 3297. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3350 - Colonial Latin America (3 Credits)
Surveys the creation of colonial empires by Spain and Portugal, 1492-1808. Topics include Native American responses to European incursions, women in colonial society, and slavery in Latin America. Cross-listed with HIST 5350 and HIST 3350. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 3396 - History of the American Indian (3 Credits)
Indigenous nations in North America comprise hundreds of diverse cultures. This course examines U.S. Indian policy and how indigenous nations responded; how they creatively adapted, and resisted cultural change; and how they continue to persist culturally, socially, and politically. Cross-listed with HIST 3396. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3574 - Topics in Ethnic Studies (3 Credits)
Topics vary from term to term, based upon interest and availability of instructors in specialized areas. Term offered: spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Spring.

ETST 3697 - Contemporary Asian American Experience (3 Credits)
Examines the contemporary Asian American experience, including the adaptation of new immigrants or refugees, economic and educational problems, ethnic identity, intermarriage, anti-Asian discrimination and other civil rights issues, and recent political activism. Cross-listed with SOCY 3697. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 3704 - Culture, Racism and Alienation (3 Credits)
The effects of racism on the personality of participants in racist cultures. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

ETST 3840 - Independent Study: ETST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

ETST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Department consent required. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

ETST 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

ETST 4000 - Research Methods in Ethnic Studies (3 Credits)
Emphasizes the acquisition of a variety of data or information collection and analytic skills, especially those applicable to historical and social inquiry in ethnic studies. Cross-listed with ETST 5000. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ETST 4020 - Race, Culture and Immigration (3 Credits)
In this course, we will consider the social and legal construction of race and immigration. We will also explore how immigrants have been racialized both historically and in the current moment. In addition, we will consider the role of culture in shaping the immigrant experience and immigrant outcomes. Restriction: Junior standing or higher or instructor permission. Cross-listed with SOCY 4020, SOCY 5020 and ETST 5020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

ETST 4030 - Race, Religion and Belonging in the United States (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images#as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 5030, RLST 4030, RLST 5030, HIST 4209 and HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4144 - Indigenous Political Systems (3 Credits)
Surveys political theory and practice in indigenous societies in the Americas. Examines the impact of indigenous political thought on Euro-American politics, especially the U.S. Constitution, and explores the contemporary impact of indigenous people on current politics. Cross-listed with PSCI 4144. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4146 - Indigenous Politics (3 Credits)
Surveys the status of the world's native peoples and nations, and the role of law and politics in the future of indigenous peoples in the global arena. Examines questions of human rights, economic development, and international law and politics. Cross-listed with PSCI 4146, 5145. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4156 - The Arab-Israeli Peace Process (3 Credits)
Critical analysis of Arab and Israeli perspectives on the on-going peace negotiations in the Middle East. Historical background and religious-cultural aspects of current problems. Prereq: Upper division standing. Cross-listed with PSCI 4156. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

ETST 4165 - Cultural Diversity Awareness in the Workplace (3 Credits)
This course will analyze the impact and effectiveness of cultural diversity awareness in a variety of workplace settings including educational institutions, businesses, health care organizations, and non-profit organizations. Students will learn how implicit biases and structural inequality impact workplace culture, a work place's productivity, and a work place's ability to fulfill their mission. By the end of the course, students will acquire the skills to advocate for and implement inclusive work place policies. Cross-listed with ETST 5165. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4220 - African-American Literature (3 Credits)
Surveys African-American literature with special emphasis on post-Civil War writing. Cross-listed with ETST 5220, ENGL 4220 and 5220. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

ETST 4297 - Theorizing the Transpacific (3 Credits)
What is the transpacific? Though this term is most associated with global trade and economic interests, this course will examine the migratory and cultural precedents for this term. What do other perspectives from Oceania and from pacific rim countries offer us to theorize the meaning of the transpacific(s). How might a social and cultural understanding of the transpacific engage with the political and economic understandings of the transpacific undergirded by trade relations? Note: Recommended that ETST 3297- Social History of Asian Americans be completed first. Term offered: spring. Cross-listed with ETST 5297. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4305 - Women of Color Feminisms (3 Credits)
This course is an overview of women of color feminist theorizing (thinking) and praxis (practice) in the U.S. We will explore these feminisms through the writing, art, and organizing efforts of women and trans, femme, and non-binary people of color with a focus on key themes and concepts including identity, difference, oppression, intersectionality, representation, violence, resistance, empowerment, solidarity, and coalition. Texts for the course highlight key issues in the feminist theorizing and praxis of Black, Latina/x, Chicana/x, Asian (American), Pacific Islander, Indigenous, and Arab (American) women and trans, femme, and non-binary people of color, especially the politics of identity and representation; structural oppressions and violences; and practices of survival, resistance, and activism. Not only will we examine how these feminists have critiqued oppression(s) based on race, class, gender, sexuality, nationality, and religion, (as well as how these systems of domination intersect), but what kinds of approaches, strategies, and changes these thinkers and activists have organized for and promoted. Cross-listed with ETST 5305, WGST 4305 and WGST 5305. Max hours: 3 Credits
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4411 - Modern Mexico (3 Credits)
Designed to familiarize students with the critical issues of Mexican political, economic and social history. Traces the emergence of independence and the difficult consolidation of an independent nation state. Cross-listed with HIST 4411, 5411. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4457 - American Political Thought (3 Credits)
Critical examination of American political life at the intersections of social categories such as race, class, gender, sexuality, disability, and Indigeneity. Exploration of key and marginal thinkers through a variety of texts and genres. Cross-listed with PSCI 4457, PSCI 5457, and ETST 5457. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4574 - Special Topics (3 Credits)
Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4722 - Communicating Latinx Cultures (3 Credits)
Communicating Latina/o/x Cultures centers historical and contemporary vernacular and institutional discourse sand narratives about, by, and for Latina/o/x people and communities. Drawing on theories, methods, and practices to understand the complexities of Latina/o/x cultures and lives, we will investigate how different actors and activists express and experience borders, migration, dispossession, citizenship, colonialism/coloniality, colorism, white supremacy, environmental racism(including anti-Blackness), mono- and multilingualism, self-determination struggles, power, representation, resistance, and mutual support networks for alternative worldmaking. To situate these concepts and concerns, we will explore contexts and places ranging from Colorado to the Caribbean. Term Typically Offered: Spring. Cross-listed with COMM 4722, COMM 5722, and ETST 5722. Max hours: 3 credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4768 - Chicano/Chicana Narrative and Social History (3 Credits)
Provides a general, chronological, and thematic introduction to short stories and novels written by U.S. citizens of Mexican descent. Begins with early 20th century narratives by women, continues with the corrido and Post-World War II male writers, and ends with more recent publications by contemporary women writers. Social, historical, and political backgrounds are also emphasized, along with an analysis of the literary techniques and motifs. Cross-listed with ENGL 4768. Max hours: 3 Credits.
Grading Basis: Letter Grade

ETST 4840 - Independent Study: ETST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

ETST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

ETST 4960 - Capstone in Ethnic Studies (3 Credits)
Provides a broad overview of social research methods pertinent to the study of race, ethnicity, gender, and culture. Explores theories concerning "ethnicity and race" as both social construct and constituent feature of people's identities and lived experiences. Ethnic Studies is an interdisciplinary major where students make connections across diverse fields of inquiry; this course provides a structure for integrating an interdisciplinary examination of the intellectual, cultural, and social dimensions of racial and ethnic groups. Cross-listed with ETST 5960. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

ETST 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

Film and Television (FITV)

FITV 1001 - Fundamentals of Film and Television (3 Credits)
Provides fundamentals in academic theories surrounding visual culture. Topics include representation, spectatorship, mass media and popular culture, new media, and scientific images. Student participation is through discussion, creative projects, reading, and written response. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall, Spring.

FITV 1005 - Introduction to Theatre & Arts in the Community (3 Credits)
Discussion, workshops, and lectures designed to discover, analyze, and evaluate all aspects of the theatre experience: writing, acting, directing, staging, history, theory and its relationship to film & video. Attending plays and field trips to several Denver-area theaters, and demonstrations. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts; GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression.

FITV 1035 - Introduction to Filmmaking (3 Credits)
Students will be introduced to the concepts and practices of filmmaking. Through a series of hands-on exercises students will gain experience production management, cinematography, editing and client/director relationships. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to non-College of Arts and Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA

FITV 1040 - Lighting, Grip, and Sound Introductory Workshop (3 Credits)
The purpose of this course is to acquire basic competence with all film/video production equipment. The course acts as an introductory look at maintaining professionalism, efficiency, and safety in film/video sets for cast and crew. Restriction: Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media.

FITV 1050 - Production I Basics of Film and Television (3 Credits)
Learn the fundamentals of video production including idea creation, videography, composing a professional image, cinematic lighting, sound track recording and construction, non-linear software. Individual and collaborative productions for film, video, and TV will be created. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors & FTPM minors (production) within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors FTPM minors (production) within the College of Arts Media.

FITV 1110 - Production Design: Theatre, Film and Video (3 Credits)
This design research class explores the creative skills, technical knowledge and scholarly engagement employed by production designers. The students will understand how design elements enhance a production and create a production design for a video, film or play. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 1115 - Horror in Western Culture and Cinema (3 Credits)
This course is designed to analyze the history, practice and production of the horror film. By examining the horror genre students analyze how cinema is both a reflection of the time it was produced as well as it impacts on art and society. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

FITV 1120 - Contemporary World Cinema (3 Credits)
This course will examine representative examples of films from around the world to understand the current interest and concerns of world cinema, as well as discern what concerns various countries around the world, and how those concerns are expressed. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FITV 1200 - The Culture of Television (3 Credits)
The course will combine viewing of television programs with reading, writing and discussing television as students begin to understand intellectually, and learn to take an analytical view of this remarkable phenomenon. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FITV 1550 - Scriptwriting 1 - Fiction (3 Credits)
Critical exploration of dramatic writing for stage and screen. Understand how imagery, character, story, narrative structure, literary conventions, and more, impact compelling writing. Utilize effective writing and critiquing strategies focused on drafting and writing an original film/TV script. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media with the subplan FIT. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors with the subplan FIT and FTPM minors within the College of Arts and Media.
Typically Offered: Fall, Spring.

FITV 1551 - Scriptwriting for Non-Majors (3 Credits)
Critical exploration of dramatic writing for stage and screen. Understand how imagery, character, story, narrative structure, literary conventions, and more, impact compelling writing. Utilize effective writing and critiquing strategies focused on drafting and writing an original film/TV script. Max hours: 3 Credits.
Grading Basis: Letter Grade

FITV 1600 - Writing Short Film:Non Fiction (3 Credits)
Students study basic writing elements such as idea generation, character building, and scene setting while writing short non-fiction screenplays or teleplays for production. Prereq: TFTV-BFA: FITV 1550. Prereq: FTWM minor: no pre-req. Restriction: Restricted to TFTV-BFA majors & FTWM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 1550 Prereq: FTWM minor: no pre-req Restriction: Restricted to TFTV-BFA majors FTWM minors within the College of Arts and Media.

FITV 2040 - Editing and Post Production Techniques (3 Credits)
This course introduces the art of editing and post-production for film and television practices. Students will use various software applications; Adobe Premiere, Adobe After Effects and Photoshop as the platform to explore the fundamentals of visual storytelling, graphics, visual effects, compositing, color correction, compression concepts, input, output and software integration, and how that work can be integrated into varying film and television projects. Prereq: TFTV-BFA: FITV 1001. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 1001 Prereq: FTPM minor: FITV 1050 or FITV 1035

FITV 2050 - Production II Film and Television Techniques (3 Credits)
Through a series of assigned film and TV projects students will be introduced to various genres of filmmaking, while building upon the skills of preproduction, production, and post-production. Prereq: BFA: FITV 1050. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 1050 Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Spring.

FITV 2055 - Documentary Production (3 Credits)
Students produce non-fiction film/TV productions in collaboration with non-profit organizations while exploring and experiencing industry practices. Prereq: FITV 1050 + FITV 2090. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1050 + FITV 2090 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 2090 - Producing for Film and Television (3 Credits)
Students will learn the various aspects of planning, scheduling, budgeting, and managing both television and film productions. Students will develop skills for conceptualizing projects from script to screen. Prereq: FITV 1550. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1550 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 2220 - Acting for Film and Television (3 Credits)
Provides the study, skill development and workshop experience for the actor in various media – including film, television, commercial, and voice-over work. Students do physical exercises, vocal training, develop vocabulary, and scene exercises. Prereq: BFA : FITV 1050 + FITV 1550. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors, FTPM minors, and FIPR minors in the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors, FTPM minors, and FIPR minors in the College of Arts and Media. Prereq: BFA : FITV 1050 + FITV 1550 Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Fall.

FITV 2221 - Acting for Non-Majors (3 Credits)
Introduction to performance for film, TV and commercials. Students do psychical exercises, vocal training, develop vocabulary, and scene exercises. Restriction: Restricted to non-College of Arts & Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to non-College of Arts and Media students and CAM Code Plans: MUSC-BS, RCDA-MS, FINE-BFA, FINE-BA

FITV 2650 - Sound for Film and TV (3 Credits)
Building upon basic understandings of audio for film and television techniques, students will get intermediate instruction and experience with field audio recording and audio post-production practices. Students will work with digital audio editing software to gain knowledge and skills in sweetening, mixing, and sound design. Prereq: FITV 1040. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1040 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 2670 - Cinematography (3 Credits)
Students create film and TV projects that exhibit effective use of light, composition, depth of field, focal length. Student directors will learn how to collaborate with cinematographers and understand the science of photography, lenses, and lighting. Prereq: FITV 2040 + FITV 1050. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040 + FITV 1050 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Spring.

FITV 3040 - TV Studio Production (3 Credits)
Working in a multi-camera television studio environment, students in this course will experience each aspect of creating multiple live-to-tape television programs. Students will work in teams to create a television pilot as well as individual projects. Prereq: BFA: FITV 3050 + FITV 3500. Prereq: FTPM minor: FITV 1050 or FITV 1035. Restriction: Restricted to TFTV-BFA majors & FTPM minors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to TFTV-BFA majors FTPM minors within the College of Arts and Media. Prereq: TFTV-BFA: FITV 3050 + FITV 3500
Prereq: FTPM minor: FITV 1050 or FITV 1035
Typically Offered: Spring.

FITV 3050 - Junior Project Production (3 Credits)
Students will refine their knowledge of single-camera film and TV techniques in this hands-on, collaborative course. Students will conceptualize, develop, and shoot a short film or television project throughout the semester. Emphasis on storytelling, production design, production management, and cinematography. Prereq: FITV 2050 + FITV 1200 + FITV 2670 + FITV 2650. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2050 + FITV 1200 + FITV 2670 + FITV 2650 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media.

FITV 3060 - Junior Project Post Production (3 Credits)
Students will apply post-production skills learned in previous courses to edit projects produced in Prod 3/Jr Project. This course will emphasize the completion of a professional broadcast-quality production with full audio and visual sweetening. Students will attain advanced editing skills through a longer format project. Prereq: FITV 3050 + FITV 3500. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3050 + FITV 3500 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 3090 - Producing Episodic Television (3 Credits)
Students explore and develop skills in the collective practices necessary for the full production of an episodic television series. Students will actively participate in various aspects of episodic television production including preproduction, production, and post-production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3050/FILM 3270 and FITV 3500/FILM 4500 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 3200 - History of Cinematic Arts I (3 Credits)
The development of cinema in the early 1880s brought with it a wealth of techniques still used today, from the close-up to crosscutting and montage. In this course students will view, analyze, research, and critique the beauty and sophistication of silent film from its beginnings through the late 1930s. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FITV 3220 - Advanced Acting Workshop for Film and Television (3 Credits)
Students will further explore techniques and practices in the performing for film and television projects. This is an intense workshop designed to better prepare students to perform for a variety of on-camera projects. Prereq: FITV 2220 or FITV 2221. Restriction: Restricted to TFTV-BFA majors or FIPR Minors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2220 or FITV 2221 Restriction: Restricted to TFTV-BFA majors and FIPR Minors within the College of Arts Media

FITV 3264 - Advanced Digital Effects (3 Credits)
Students will study software and create projects with advanced visual effects. With industry standard techniques in animation, applying compositing, image acquisition and motion graphics. Students will create a variety of projects by the end of the semester. Prereq: FITV 2040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040

FITV 3300 - History of Cinematic Arts II (3 Credits)
Take a journey through the many genres of film, from the introduction of sound to the present. Students will trace the development of various Hollywood genres and examine films that represent major developments in American cinema. In this course students will view, analyze, research, and critique films from 1938 to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FITV 3350 - Editing Aesthetics (3 Credits)
A historical, theoretical, and practical hands-on approach to deconstructing and utilizing editing aesthetics. Students will consider the theory behind editing strategies that elicit an emotional or response from viewers, and put those theories to practice through demonstrative production exercises as well as analytical writing. Prereq: FITV 2050. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2050

FITV 3500 - Writing for Episodic Television (3 Credits)
Explores the constructive and critical process of writing prime-time dramatic television and alternative broadcast platforms. Each student is guided through a series of viewings, readings, and writing exercises culminating with the written completion of television episodes for an original series. Prereq: TFTV-BFA FITV 1200 + FITV 2050. Prereq: FTWM minor. FITV 1551 Restriction: Restricted to TFTV-BFA majors and FTWM minors in the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA FITV 1200 + FITV 2050 Prereq: FTWM minor. FITV 1551 Restriction: Restricted to TFTV-BFA majors and FTWM minors in the College of Arts Media

FITV 3510 - Writing the Thesis (3 Credits)
Critical exploration of dramatic writing for the screen with a focus on advanced short narrative screenplays. The course serves as a precursor to the FITV thesis project. Students will utilize intensive workshop and writing techniques to develop original screenplays in preparation for the Department of Film and Television's senior thesis course. Prereq: TFTV-BFA and FTWM minor. FITV 3500. Prereq: Non-TFTV-BFA Majors and Non-FTWM minors must have taken any two of ENGL 3415, ENGL 3417, ENGL 2390 or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA and FTWM minor. FITV 3500 Prereq: Non-TFTV-BFA majors or non-FTWM minors must have taken any two of ENGL 3415, ENGL 3417, ENGL 2390

FITV 3520 - Advanced Screenwriting (3 Credits)
Critical exploration of advanced screenwriting techniques with a focus on mastering sequence structure for longform projects. Students will utilize intensive workshop and writing strategies to develop original content and a fundamental understanding of industry workflows. Students will read, analyze and discuss works-in-progress by all workshop participants and present their work for peer review. Topics related to working as a professional writer will also be explored. Prereq: FITV 1550 and FITV 1600. Restriction: Restricted to TFTV-BFA majors and FTWM minors, and by instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 1550 and FITV 1600. Restriction: Restricted to TFTV-BFA majors and FTWM minors..

FITV 3550 - World Theatre (3 Credits)
Discussion, workshops and lectures designed to discover, analyze and evaluate the world theatre experience from countries outside of the United States. The course will explore theatre and its precedents in Asia, Africa, Eastern Europe and Latin America. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FITV 3570 - Directing for Film and Television (3 Credits)
Through a series of assigned video projects, students will practice the art of directing several film and television projects. Applying communication skills and directing techniques to the process. Prereq: TFTV-BFA: FITV 2220 or FITV 2221 + FITV 2050. Restriction: Restricted to TFTV-BFA majors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 2220 or FITV 2221 + FITV 2050. Restriction: Restricted to TFTV-BFA majors.

FITV 3600 - Denver Film Festival (3 Credits)
Students in this course will know how to contextualize films in terms of content and form. Through film viewing, written assignments, and critical analysis students learn to describe, classify and appreciate narrative, craft and artistic intent. Max hours: 3 Credits.
Grading Basis: Letter Grade

FITV 3611 - Drama of Diversity (3 Credits)
Investigates the creation and reinforcement of gender, ethnic, and racial stereotypes in theatre, film, and television in the United States. The course explores how popular images are created by writers, directors, and performers, and become "reality" for the audiences for which they are intended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

FITV 3620 - Business of Film (3 Credits)
This course is designed to provide FITV students with a systematic overview of the modern day filmed entertainment business. The analysis will not only cover the traditional "Hollywood System" operating out of Los Angeles but will examine the independent film model as well. This course will take a critical look at the financing, production, marketing, and distribution of filmed entertainment with particular attention paid to both the financing models at a range of budgetary levels and the various revenue streams inherent in the exploitation of such product, in both the domestic marketplace and international arena. Prereq: FITV students must have completed FITV 2090; MEIS students must have completed MUSC 2700 OR MUSC 2750. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV students must have completed FITV 2090; MEIS students must have completed MUSC 2700 OR MUSC 2750.
Typically Offered: Fall, Spring.

FITV 3770 - Advanced Production Design for Film and Television (3 Credits)
Students with further explore design elements found in film and television, and utilize class projects in conjunction with other student film projects. Prereq: THTR 1110 or FITV 1110. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: THTR 1110 or FITV 1110 Restriction: Restricted to TFTV-BFA majors within the College of Arts Media
Typically Offered: Fall.

FITV 4000 - Senior Thesis Production (3 Credits)
The first course of a two-part capstone experience in which students collaborate, plan, cast, budget, and produce a professional quality film/TV project or script. Projects/scripts will be completed in FITV 4010. Prereq: FITV 3040 + FITV 3050 or FITV 3090 + FITV 3200. Restriction: Restricted to TFTV-BFA majors within in the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 3040 + FITV 3050 or FITV 3090 + FITV 3200 Restriction: Restricted to TFTV-BFA majors within in the College of Arts and Media
Typically Offered: Fall.

FITV 4010 - Senior Thesis Post-Production (3 Credits)
Second course of a two-part capstone experience in which students collaborate on post-production to complete the film/TV/script project. Emphasis will be on editing, color-correcting, audio sweetening, graphics, finishing a fine-cut of their project; students will seek distribution and exhibition. Prereq: FITV 4000. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 4000 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Spring.

FITV 4020 - CAM Film Productions (3 Credits)
Under the supervision of a faculty member, this class works together as a group to create broadcast quality television projects. Projects will be designed for a PBS television market and may be aired as such. Pre-requisite: FITV 2050. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FITV 2050 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media

FITV 4050 - Advanced Cinematography (3 Credits)
In this production workshop, students will analyze films and storyboards, and shoot projects created for specific action and special effects outcomes. In addition, students will examine a variety of techniques used to create action scenes in preparation for the edit. Prereq: FITV 2670. Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2670 Restriction: Restricted to TFTV-BFA majors within the College of Arts and Media
Typically Offered: Fall.

FITV 4200 - Advanced Acting & Directing Workshop (3 Credits)
This class will be dedicated to exploring the art and craft of developing powerful performances. We will regularly divide into groups of three (one director & two actors) so that at least two-thirds of your time will be devoted to acting. Prereq: FITV 2570 or FITV 3570. Restriction: Restricted to TFTV-BFA majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
D-ART FITV 2570/3570+TFTV-BFA
Typically Offered: Fall.

FITV 4400 - Acting for Film and TV Practicum (3 Credits)
The practice, study and critique of acting and directing for varying film/TV projects. The class will incorporate, preparatory work, on-camera performance, directing, and an in-depth critique of the resulting work. Prereq: TFTV-BFA: FITV 3220. Restriction: TFTV-BFA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: TFTV-BFA: FITV 3220. Restriction: TFTV-BFA.

FITV 4440 - Color Correction and Mastering for Film and Television (3 Credits)
This course is designed to teach students the process of color grading and film finishing techniques. This includes use of industry standard color correction software and methods of providing deliverables for film and television distribution and exhibition. Prereq: FITV 2040. Restriction: Restricted to TFTV-BFA majors and FTPM minors. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FITV 2040. Restriction: Restricted to TFTV-BFA majors and FTPM minors.

FITV 4600 - Special Topics (3 Credits)
Specialized topics in film and video. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

FITV 4840 - Independent Study: FILM (1-3 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FITV 4939 - Internship in Film and TV (1-6 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Finance (FNCE)

FNCE 1001 - Financial Literacy for Business (1 Credit)
The five day workshop on financial literacy will provide students with the opportunity to build a basic financial literacy toolkit, including managing your money, mastering credit & debt, investing, and planning for the future. Students will also learn about business in Denver. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Summer.

FNCE 1500 - Introduction to Investment Services (1 Credit)
This class provides students with a broad overview of career opportunities in finance, focusing on financial services and banks. We first introduce several career paths in finance, and then briefly introduce the origins of money and banking. We turn to an in-depth study of the financial services industry, including the services provided by companies and listing financial services products as well as who develop and regulates those services. We map the skills (technical and personal) that are required for an individual to succeed in the industry. The course will have a special focus in companies in Colorado and the Colorado Investment Service Coalition (CISC). We close the course with mapping key ethics in the financial services industry. The course will address the full range of financial services careers, including investment and commercial banking, insurance, pension plans, risk management, mutual funds, e-commerce, and personal and business planning. Max hours: 1 Credit.
Grading Basis: Letter Grade

FNCE 2939 - Internship (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

FNCE 3000 - Principles of Finance (3 Credits)
This course provides an introduction to financial markets and institutions, financial statement analysis, interest rates and the time value of money, principles of security valuation, concepts of risk and return, and capital budgeting. Note: This course is required in the Business Core. A grade of 'C' or better must be earned. Prereq: MATH 1070 or MATH 1060 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401, AND ACCT 2200, AND DSCI/BANA 2010 or ECON 3811 all with a grade of C- or higher, AND ECON 2012 AND ECON 2022. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1070 or MATH 1060 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401 AND ACCT 2200 AND DSCI/BANA 2010 or ECON 3811 all with a C- or higher AND ECON 2012 AND ECON 2022. Rest: Restricted to undergrad students at junior standing or higher.

FNCE 3500 - Management of Business Capital (3 Credits)
Students learn the basic principles governing the management of capital in the business firm. Topics include management of working capital, cost of capital, capital budgeting, firm valuation, and theory and management of capital structure, grade of 'C' must be earned to take subsequent courses for which this course is a prereq. Prereq: FNCE 3000 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 3600 - Financial Markets and Institutions (3 Credits)
Focuses on the supply and demand for loanable funds, the process of money creation, the structure of interest rates, and the role of banks and the Federal Reserve in the financial system. Special attention is devoted to the impact of monetary and fiscal policies on interest rates, the flow of funds and economic activity; and the operation of financial markets and institution. Prereq: FNCE 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring.

FNCE 3700 - Investment and Portfolio Management (3 Credits)
In this course students learn about the different types of investment vehicles, including methods to estimate their value and analyze their risk. They will also be introduced to portfolio management, including the identification of objectives and constraints and the analysis and use of investment information. Topics include the functioning of security markets, asset allocation, security valuation, and portfolio analysis. A grade of 'C' or better must be earned to receive credit for the course, and to take subsequent courses for which it is a prerequisite. Note: FNCE 3700 and FNCE 3600 may be taken concurrently. Prereq: FNCE 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 3840 - Independent Study: FNCE (1-3 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4370 - International Financial Management (3 Credits)
Financial management in the international environment. Topics include international capital movements; international operations as they affect the financial functions; foreign and international institutions; and the foreign exchange process. Also considers foreign exchange theory and risk management, financial requirements, problems, sources, and policies of firms doing business internationally. Cross-listed with INTB 4370. Prereq: FNCE 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 4382 - Survey of Financial and Commodity Derivatives (3 Credits)
This course introduces forward contracts, used in price risk management for millennia. We cover the properties of forward/futures contracts, structure of the markets and strategic implications for speculation and hedging. We price forwards from spot price, and introduce convenience yield. Options used for insurance purpose (think of your car insurance as a put option) is a more expensive way to manage risk; we cover option strategies and basic pricing. The course concludes with swaps, credit derivatives and structured products. Asset classes covered are equity, fixed income, currency, agriculture, energy (oil/gas and electricity) and metal/mining. Prereq: FNCE 3500 and FNCE 3700 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 and 3700 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall, Spring, Summer.

FNCE 4411 - International Corporate Governance (3 Credits)
Discusses the structure and goals of the modern corporation, the primary governance mechanisms used to help companies achieve these goals, and how and why these roles, goals, and mechanisms vary across nations. The topics covered in the course include managerial compensation, board of director structure and ethics, shareholder activism, and how governance structures differ across countries. Prereq: FNCE 3000. Cross-listed with FNCE 6411 and INTB 6411 Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000

FNCE 4424 - Corporate Restructuring (3 Credits)
Examines the processes and decisions by which mergers, takeovers and other corporate restructuring ace, the transactions occur. Analyzes merger and acquisition decisions as part of strategic decision making, and how firms are valued in mergers. Discusses the market for corporate control and the public policy implications of mergers and corporate governance. Prereq: FNCE 3500. Restriction: Restricted to undergraduate Business majors with a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 Requisite: Restricted to undergraduate Business majors with a junior standing or higher

FNCE 4470 - Behavioral Finance (3 Credits)
Over the past several decades, the field of finance has developed a successful paradigm based on the notions that investors and managers were generally rational and the prices of securities were generally “efficient.” In recent years, however, anecdotal evidence as well as theoretical and empirical research has shown this paradigm to be insufficient to describe various features of actual financial markets. In this course we examine how the insights of behavioral finance complements the traditional paradigm and sheds light on the behavior of asset prices, corporate finance, and various Wall Street institutions and practices. Prereq: FNCE 3500 with a C or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3500 with a C or higher

FNCE 4480 - Introduction to Financial Modeling (3 Credits)
Develops and implements financial models for purposes of financial planning and decision making. This course seeks to increase students’ knowledge and skill in the development of basic Excel-based financial planning models, including cash budgets, financial statements, and capital budgeting analysis. The course also introduces Monte Carlo simulation using Palisade Corporation’s @RISK software. Knowledge of computer and spreadsheet software needed. Restriction: Restricted to undergraduate Business majors at a junior standing or higher Prereq: FNCE 3000, FNCE 3500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 and FNCE 3500. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 4490 - Commodity Trading (3 Credits)
This is a co-listed class with the J.P. Morgan Center for Commodities and the Finance Department. This course focuses on how securities and futures contracts are designed and traded including trading exchange operations, regulation, trading mechanisms and processes. Students will learn the theory and practice of securities and futures contract trading with a focus on hands-on trading experience using industry software (CQG and Bloomberg) as well use of data sources (Morningstar). In this course, we will review the origins of liquidity, volatility, price efficiency, and trading profits. Next we will cover a host of topics concerning equity and commodity trade execution strategies, such as why and how investors trade, what and when investors profit from investing and speculating, the key principles of high-frequency trading and investor’s overconfidence, why market institutions are organized as they are, and the role of public policy in the markets. Cross-listed with CMDT 4490, CMDT 6490 and FNCE 6490. Max hours: 3 Credits.
Grading Basis: Letter Grade

FNCE 4500 - Corporate Financial Decisions (3 Credits)
This is a required capstone course for the financial management emphasis. It uses the case method to develop the analytical and decision making skills of students. Students are required to apply theories and concepts learned in previous finance and accounting classes to real world scenarios. Topical coverage includes financial analysis, planning, control, working capital management, long-term investment and financing decisions and corporate valuation. A grade of 'C' or better must be earned to receive credit towards graduation. Prereq: MATH 1060 or 1070 or MATH 1110 or MATH 1080 or MATH 1130 or MATH 1401 AND DSCI/BANA 2010 AND ACCT 2200 all with a C- or higher; ECON 2012 AND ECON 2022 with a D- or higher; FNCE 3000 AND FNCE 3500 AND FNCE 3700 all with a C or higher. Restriction: Restricted to undergraduate students at a senior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1060 or 1070 or 1110 or 1080 or 1130 or 1401 AND DSCI/BANA 2010 AND ACCT 2200 with a C- or higher; ECON 2012 AND 2022 with a D- or higher; FNCE 3000 AND 3500 AND 3700 with a C or higher. Restriction: undergraduate seniors or higher.

FNCE 4709 - Life and Health Insurance (3 Credits)
The course is designed to provide the student with the basic understanding of life and health insurance concepts. The course will focus on a needs analysis for individual life insurance needs in preserving an estate or creating an estate. We also focus on the needs of the family and the preservation of the income stream for meeting short and long term needs and how we accomplish this via life insurance. We also will look at life insurance in terms of business planning using such concepts as key person life insurance, funding buy sell agreements, and related needs. On the health side, we will use a needs analysis approach to provide health coverage for the individual and family. We also explore the employee benefits arena and how businesses will focus on providing group medical coverage and related benefits in an ever changing health care environment with health care reform being phased in. We also will explore the internal workings of life and health insurance companies by review. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4750 - Business Intelligence and Financial Modeling (3 Credits)
This course will introduce students to the application of business intelligence in a corporate finance setting. Financial data intelligence is essential for effective decision making throughout the firm, in finance directly and in other functions supported by the finance department. Strategy setting, budgeting, and new product development are just a few decision areas where finance personnel play an active role. In this course, we learn how to apply business intelligence software tools to enable finance personnel to access and analyze corporate data in support of critical decision making across the enterprise. Students will also analyze data through the use of financial models built in Microsoft Excel. The development of complex financial models will provide students with valuable hands-on experience with a software tool used widely incorporate finance departments. Prereq: ISMG 2050 with a grade of C- or higher, FNCE 3000 and (ISMG 3000 or ACCT 4054) all with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ISMG 4750 and ISMG 6820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a grade of C- or higher, FNCE 3000 and (ISMG 3000 or ACCT 4054) all with a grade of 'C' or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

FNCE 4802 - Foundations of Commodities (3 Credits)
This course introduces students to the physical aspects of commodities and connects them to the financial markets in which commodities are traded. Fundamental concepts and terminology necessary for understanding commodity production, transportation, economics, financial analysis and marketing are described. Supply chains for several specific commodities are reviewed in detail, as examples of the production and market structure knowledge needed to be successful professional participants in commodity trading capacities. The course also serves a foundation for more focused education in the specific commodity sectors, as well as the applied use of marketing and financial trading concepts learned in other courses. Cross-listed with FNCE 6802 and CMDT 4802/6802. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4840 - Independent Study: FNCE (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

FNCE 4880 - Ethics in Finance (3 Credits)
The undergraduate business finance student develops an in-depth knowledge of ethical parameters for business and finance decision making. The course addresses the ethics issues with a heavy emphasis on finance, but also includes discussion and analysis of general ethics frameworks, ethics and internal controls, and the relationship of finance law and ethics. The influence of ethics on an organization's decision-making is stressed. Case studies and current issues in finance ethics will be addressed. Restriction: Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.

FNCE 4950 - Special Topics (1-3 Credits)
Research methods and results, special topics and professional development in finance. Prerequisites vary according to topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Fine Arts (FINE)

FINE 1000 - Fostering Creativity (3 Credits)
Through discussions, readings, writings and creative investigations, students will delve into theoretical and experiential approaches to creativity and consider how different kinds of creativity and passions can be identified, cultivated and leveraged in their current and future academic and professional lives. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

FINE 1001 - Introduction to Art (3 Credits)
The course introduces visual analysis and critical examination of art from prehistory to modern times. Through reading, vocabulary development, group discussions, tests, and research projects, students will learn how to appreciate art and critically evaluate form, content, and context. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression; Denver Core Requirement, Arts.

FINE 1002 - International Perspectives through Animation (3 Credits)
This course is a look at world political, economic, social, and technological challenges through the lens of animation and visual storytelling. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

FINE 1003 - Creative Coding (3 Credits)
Through discussions, readings, writings, and creative investigations, students will identify and evaluate the digital tools and software present in everyday life while they explore and learn the basics of computer code and the power of code as a creative tool. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1004 - Video Games, Story and Society (3 Credits)
By investigating various methods and theories, this course will examine how stories are crafted to fit the interactive aspects of video games, their resemblance and dependence on traditional stories, and how unorthodox plots, characters, and impact game play. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.
Typically Offered: Fall.

FINE 1100 - Drawing I (3 Credits)
This course explores the act of drawing as a process of visual thought as an initial step to artistic expression. Students will develop an understanding of the basic principles of drawing as a way of learning to see. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1111 - First-Year Seminar (1-3 Credits)
Restriction: Restricted to Freshman level students. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to Freshman level students

FINE 1120 - Photographic Fundamentals (3 Credits)
Students learn fundamentals of digital photography through creative assignments that promote a broad understanding of the photographic medium. Topics include digital camera operation, sizing and resolution, principles of design, and interpreting photographic meaning. This course is designed for non-art majors. Restriction: Open to all students except FINE-BFA & BA. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Open to all students except FINE-BFA BA

FINE 1140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 1150 - Introduction to Darkroom Photography (3 Credits)
Students learn traditional, film-based photographic practice. Topics such as camera functions, film processing, black and white darkroom printing, and alternative darkroom techniques are explored through demonstrations, critiques, readings, and discussions of historical and contemporary photography. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1400 - Two Dimensional Design (3 Credits)
Focuses on the concepts and visual elements of all forms of two-dimensional art. Students gain an understanding of basic design principles as they analyze and visually articulate formal concerns in viewing contemporary and historical artworks as applied to studio problems. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1450 - Visual Culture: Ways of Seeing (3 Credits)
A core course for majors and non-majors Visual Culture: Ways of Seeing explores how the meaning of imagery is encoded in cultural settings and transforms globally through changing technology and is integrated into daily life. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression; Denver Core Requirement, Arts.

FINE 1500 - Three-Dimensional Design (3 Credits)
Students explore the elements of art and the principles of design applied to three-dimensional design while developing an understanding of material properties, techniques, processes and tools. Creative practice is accompanied by written, theoretical and verbal critical thinking skills. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1810 - Digital 3D Foundations (3 Credits)
A lecture/lab course that explores the foundations of creating digital 3D content. Primary focus is an introduction to current 3D software. Class lectures, demonstrations and hands-on application will expose the student to the expectations for commercial high-end 3D animation production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 1812 - 3D Computer Graphics: Producing Animation (3 Credits)
An online course that explores the theory, practices and fundamentals of the producing 3D animation. Students will explore the foundations of the animation process Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1820 - Animation Foundations (3 Credits)
A lecture/lab course that explores the foundations of animation. Primary focus is an introduction to foundational animation techniques and methods. Class lectures, demonstrations and hands-on application will expose the student the expectations for high-end animation production. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 1822 - 3D Computer Graphics: Introduction to Digital 3D (3 Credits)
An online course that explores the foundations of creating digital 3D content. Primary focus is an introduction to current 3D software. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 1825 - Characters and Environmental Design (3 Credits)
Students will learn to design characters and environments based on experimentations with color, proportion, texture, and expression that add depth and context to a story. Students will examine the history of character design and environment as applied to animation, children's books, and toys identifying how practical and cultural processes influence design. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 2020 - Drawing II (3 Credits)
Students explore complex problems in the representation of space and learn observational drawing methods. Perceptual and constructed perspective is utilized to visualize three-dimensional form. Contemporary and historical artworks are studied with emphasis on the design of effective compositions. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 2030 - Life Drawing (3 Credits)
This course introduces the student to the human figure, addressing anatomy, movement and proportion. Discussion of historic and contemporary critical methods supplement studio practice. Exploring a variety of drawing media, students expand their drawing skills and relate the principles of composition and design to figure drawing. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 2105 - PRE-DIGD — Human-Centered Design, Innovation and Prototyping (3 Credits)
Introduces collaborative interdisciplinary design and innovation from a human perspective. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 2155 - Introduction to Digital Photography (3 Credits)
Students learn digital image manipulation, input and output strategies, and digital camera functions through assignments that emphasize conceptual development. Presentations, readings, projects and class discussions help students gain an understanding of the role of digital imaging in contemporary photography. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2200 - Painting I (3 Credits)
This course is an introduction to the language of painting. Students will learn to develop composition in layers, working from value to color and from direct observation to abstraction while exploring the range of visual possibilities that painting offers. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2405 - Introduction to Digital Design (3 Credits)
A project-based exploration of the design potentials of vector, raster and motion based digital media. Through project critiques, discussion and demonstration students will create projects that examine technology as an art medium and a design strategy. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2406 - Introduction to Digital Art & Imaging (3 Credits)
A project-based exploration of vector, raster, and motion-based digital media. Through project critiques, discussion and demonstration students will create projects explore the creative and expressive potential of digital media. Max Hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2415 - Typography Studio (3 Credits)
A studio course that teaches principles of typography and organization that is the foundation of design and artistic practice. Through drawing, editing, and moving typographic forms, students will create projects that examine how typography is used to create meaning. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2420 - The Language of Design : What Makes Design Work (3 Credits)
Through lectures, readings and discussions students explore essential contemporary design movements and designers and their effects on design, visual culture and communication. In addition, students learn and practice critical thinking skills and have the opportunity to learn and practice design processes and problem solving techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2425 - Essential Type-Design Applications (3 Credits)
A studio devoted to learning the essential design-software needed to complete basic graphic design projects. Through lectures and creative projects students will learn how to create, manipulate, and prepare various types of art files for print or digital publishing. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2428 - Introduction to Scientific Media Design (3 Credits)
Through lectures, writings, readings, and discussions students will be introduced to Scientific Media Design as a profession as well as the history and emerging directions in the field. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 2500 - Beginning Foundry (3 Credits)
Learn to produce metal castings. Bronze, aluminum and iron are cast into shapes by melting them into a liquid, pouring the metal into a mold, and removing the new solid form. Learn techniques understand equipment and explore form to create personal artwork using traditional and contemporary methods. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 2510 - Shaping Materials (3 Credits)
Creative investigation and design are applied towards conceptual ideas while students advance skills in 3D printing, wood, metal, plastics, fibers, vacuum forming. Advancing relationships with materials and tools is the premise for the exploration of individual visual vocabularies. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 2600 - Art History Survey I (3 Credits)
A lecture course studying Western and non-Western art from prehistory to medieval times, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students demonstrate knowledge of historical developments and an ability to analyze the arts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

FINE 2610 - Art History Survey II (3 Credits)
A lecture course studying Western and non-Western art from the Renaissance to today, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students demonstrate knowledge of historical developments and an ability to analyze the arts. Prerequisite applicable only for FINE-BA majors: FINE 2600. No prerequisite for all others. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BA and FINE 2600
Additional Information: Denver Core Requirement, Humanities.

FINE 2812 - 3D Computer Graphics: 3D Surface Modeling (3 Credits)
An online course focused on mastery of creating surface models for digital 3D content. Students will develop skills/knowledge about the processes and techniques for building complex 3D objects. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 1810 or 1812 and 1820 or 1822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1810 or 1812 and 1820 or 1822

FINE 2822 - Digital Cinematography (3 Credits)
A lecture/lab course focuses on mastery of digital cinematography and visual storytelling. This course translates key production techniques: composition, camera craft, depth of field, camera blocking, and more, into the 3D world. This unique approach bridges the gap between traditional live-action cinematography and cutting-edge 3D animation, giving the students skills/knowledge about cinematic theory, practices and methods, as applied to digital 3D content creation. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 2832 - 3D Computer Graphics: 3D Lighting and Rendering (3 Credits)
An online course focused on mastery of lighting the digital 3D environment. Students will develop skills/knowledge about the processes and techniques for creating realistic 3D lighting. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 2812 and 2822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2812 and 2822

FINE 2852 - 3D Computer Graphics: 3D Character Creation (3 Credits)
An online course focused on mastery of skills for creating digital 3D characters. Students will develop skills/knowledge to create digital characters. Note: Offered through Extended Studies. Must provide sufficiently powered computer. See www.cu3d.org Computer Graphics Certificate for details. Prereq: FINE 2812 and 2822. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2812 and 2822

FINE 2995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

FINE 3010 - Illustration I: Image Making (3 Credits)
In a demonstration of expressive media, students develop their own point-of-view and style. Students work in a variety of media while learning historic and contemporary trends in illustration. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3014 - The Graphic Novel Workshop (3 Credits)
This course introduces students to the visual language of the graphic novel through the creation of sequential imagery and page development. Students will delve into the pictorial methods found in both historical and contemporary comic books, Manga and alternative cartooning. Prereq: FINE 1100; Prereq: FINE-BFA ILS: FINE 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100; Prereq: FINE-BFA ILS: FINE 2030

FINE 3030 - Media of Drawing (3 Credits)
Students apply traditional and mixed media skills, experimental printmaking, photography, and sculptural space to explore drawing. This course considers drawing as an active medium that can take on multiple dimensions where students create works that experiment with all aspects of the drawn mark and its translations. Prereq: FINE 1100 and FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100 and FINE 1500.
Typically Offered: Fall.

FINE 3040 - Color Theory: Studio and Screen-Based Practice (3 Credits)
This hybrid course delves into how color is essential to traditional studio-based and digital media artists through focusing on visual color and light perception, color mixing with pigment and digital applications, and the interaction of color. Prereq: FINE 1100, 1400. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100 and FINE 1400.

FINE 3050 - Figure Painting (3 Credits)
This course is an exploration of representing the human form in pictorial space. Students will gain a knowledge of figural color, proportion, scale and space; and will understand the conceptual and visual weight carried by expressive gesture and figural form. Prereq: FINE 2030 and FINE 2200. Prereq: FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2600, FINE 2610. Prereq: PNDW-MIN: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2030 and FINE 2200 Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2600, FINE 2610 Prereq PNDW-MIN: FINE 2200

FINE 3115 - Mixed Media and Photography (3 Credits)
Students create artwork using techniques that combine photography and mixed media. Topics include expanding the photograph to a 3-dimensional form, working with light-sensitive materials, and manipulating the print surface. Students develop creative concepts that are enhanced by cross-disciplinary methods. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2155

FINE 3130 - Photography, Optics and Perspectives in Italy (3 Credits)
In this study abroad seminar course, students develop an understanding of their work within the context of the history of art and photography, particularly the artistic and scientific breakthroughs of the Renaissance, by exposing them to strategies and theories exemplified by the remarkably diverse and historically significant artwork that is available in collections in Florence, Italy. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 3135 - Historic Photographic Processes in Italy (3 Credits)
Investigates the relationship between critical concepts and alternative photographic processes in the unique cultural and artistic setting of Florence, Italy. Students create images using historic photographic methods such as salted paper, P.O.P., albumen, photo-polymer gravure and bromoil. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

FINE 3156 - Photography Studio and Lighting (3 Credits)
Students learn lighting techniques that inform the conceptual and aesthetic qualities of their photographs. Topics covered include studio practice; location photography; commercial business practices; shooting and lighting techniques; and professional presentation. Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 2155

FINE 3160 - Color and the Constructed Image (3 Credits)
Students explore traditional color photography, concept development and expressive uses of the medium. Topics include chromogenic printing, color theory, and 4x5 technique in assignments that focus on constructed imagery. Students learn about the creative impact of color on photographic representation. Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 1150

FINE 3161 - The Silver Fine Print (3 Credits)
Students learn advanced black and white darkroom techniques while translating ideas into photographic form. Techniques include the zone system, split filter printing, toning, montage printing, and film/paper choices. Students gain insight into photographic artists, techniques, and movements. Prereq: FINE-BFA PHO FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 1150

FINE 3162 - The Digital Fine Print (3 Credits)
Students learn the fine art of digital printing as it relates to photographic practice and theory. Assignments focus on conceptual development, advanced image manipulation, workflow, color management, and digital ink jet printing. Students gain insight into the role of digital imaging in contemporary culture. Prereq: FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 1100, FINE 1150, FINE 1400, FINE 2155, FINE 2600 Prereq: FINE 2155
Typically Offered: Fall.

FINE 3171 - Concepts and Processes in Photography (3 Credits)
Students develop skills in alternative photographic techniques. Processes covered include camera-less and pinhole photography, reticulation, non-silver printing, liquid emulsions, digital/traditional cross-manipulation. Students gain insights into the relationship between ideas and experimental ways of creating images. Spring only. Prereq: FINE-BFA PHO: FINE 3161. Prereq: FINE 1150. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3161. Prereq: FINE 1150.

FINE 3172 - Photography and Community (3 Credits)
Students learn strategies for creating visual narratives through photographic projects that involve the Denver community. Projects incorporate service learning, documentary photography, text and image, digital manipulation, digital printing, scanning, and handmade artist books. Spring only. Prereq: FINE-BFA PHO: FINE 3161, FINE 3162. Prereq: FINE 2155. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3162. Prereq: FINE 2155.

FINE 3200 - Intermediate Painting and Drawing (3 Credits)
In this course students develop a body of work that expands on previous course work, to make the transition from assignment-based work to an independent body of work, and to prepare for advanced level study in painting and drawing. Prereq: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2200

FINE 3240 - Abstract Painting and Drawing (3 Credits)
This course explores the methods of abstraction as applied to painting and drawing. Through developing a body of paintings and drawings, students will gain an understanding of complex formal structures in the development of their work. Prereq: FINE 1100, FINE 2200. Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2200, FINE 2600, FINE 2610. Prereq PNDW-MIN: FINE 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100, FINE 2200 Prereq FINE-BFA PND: FINE 1100, FINE 1400, FINE 1500, FINE 2155, FINE 2200, FINE 2600, FINE 2610 Prereq PNDW-MIN: FINE 2200

FINE 3300 - Painting, Drawing and the Printed Image (3 Credits)
This course explores the role of technology in the history of painting/drawing alongside studio practice. Students produce works that explore personal symbolism through the combination of graphically printed and hand-produce marks while utilizing technology as a tool in painting/drawing. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3340 - Topics in Studio Art (3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

FINE 3342 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 3343 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 3400 - Designing for Web and Mobile Apps (3 Credits)
In a design laboratory, students learn how to design for the web and mobile devices. Through lectures, writings, readings, discussion and critiques, students will learn about HTML, CSS, CMS, web hosting, analytics and the principles of UX/UI. Restriction: Restricted to sophomore standing or above. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 3404 - Typography II (3 Credits)
A design laboratory that teaches advanced principles of typography including multiple page documents and complex typographic systems for print and screen. Students will create complex design projects that explore the relationship between type and image. Prereq: FINE 2415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2415

FINE 3405 - Introduction to Digital Video (3 Credits)
A studio course for non-design-majors that focuses on the basics of storytelling using digital video. Through class projects, screenings, discussions and readings, students explore the concepts of montage and strategies to develop compelling video for artistic and commercial purposes. Prereq: FINE-BFA APC: FINE 2155. Note: class may not be taken by Digital Design or Transmedia majors for credit toward degree. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA APC: FINE 2155

FINE 3410 - Illustration II: Digital Media (3 Credits)
Students consider the diverse perspectives of clients, viewers, and context while developing concept art and imaginative illustrations. Digital workflows, visual research, and an iterative process are emphasized. Prereq: FINE 3010. Restriction: FINE-BFA ILS or FINE-BFA APC. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3010. Restriction: FINE-BFA ILS or FINE-BFA APC

FINE 3414 - Motion Design I (3 Credits)
A course devoted to understanding time based imagery that focuses on utilizing video and motion graphics as a creative communication tool. Students create projects that explore topics using video, animation, time and motion using a non-linear digital editing software. Restriction: Restricted to students with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 3415 - Design Studio I (3 Credits)
In a design laboratory students learn to turn ideas into visual solutions through the application of design principles. Through lectures, writings, readings, discussion and critiques of projects assigned students will build visual literacy in relation to digital design. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to FINE-BFA majors with sub-plan of DIG or DIGD minors within the College of Arts and Media.

FINE 3417 - Design Research (3 Credits)
This seminar class examines methods and processes used by designers to better understand the content they are asked to communicate while addressing increasingly complex social, technological and economic problems. Class topics will include: user interface and experience design, demographics, storyboarding, branding, and concept mapping. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to FINE-BFA majors with sub-plan of DIG or DIGD minors within the College of Arts and Media.

FINE 3420 - Printing Preparation and Process (3 Credits)
Through print shop visits, creating, manipulating, and preparing various types of art files for print or digital publishing, students will explore the history, various processes, and file preparation that are essential to producing final designed products. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3424 - Interactive Media (3 Credits)
A foundational interactive design workshop exploring how to convey message and deliver information. Through critiques of projects, discussion and research, students will learn principles of user interface design, aesthetics and structure including their potential cultural impact. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN. Prereq: FINE 3414 and FINE 3415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3414 and FINE 3415. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN.

FINE 3434 - 3D Motion Design (3 Credits)
A course devoted to 3D as a medium for creating works of art. Through demonstration, discussion, readings and project based explorations, students will learn to navigate and create in the 3D digital environment. Restrictions: Restricted to FINE-BFA DIG or DIGD MIN. Prereq: FINE 3444, 3464. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3444, 3464 Restrictions: Restricted to FINE-BFA DIG or DIGD MIN
Typically Offered: Fall.

FINE 3444 - Interactive Media II (3 Credits)
An intermediate interactive design workshop devoted to using interactive design to solve communication and information problems at scale. Through investigations, readings and discussions students will create projects that explore user experience design, accessibility, and advanced research techniques. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3424, 3454. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3424, 3454 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Fall.

FINE 3450 - Digital Painting (3 Credits)
Digital Painting is a studio designed for student exploration of artistic expression using digital tools for traditional painting and illustration techniques. Prereq: FINE 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1100

FINE 3454 - Motion Design II (3 Credits)
An intense course devoted to using time and motion as a medium for communicating ideas and information. Through creative investigations, readings and discussions students explore linkages between non-linear editing, animation and 3-dimensional animation as used in motion graphics. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3414 and FINE 3415. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3414, 3415. Restriction: Restricted to FINE-BFA DIG.
Typically Offered: Spring.

FINE 3464 - Design Studio II (3 Credits)
In a studio environment students will develop advanced projects using animation, interactivity and motion graphics to create innovative solutions to design problems. Students will learn to apply design theory to practice through discussion, critiques and assigned projects. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 3424, 3454. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3424, 3454 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Spring.

FINE 3474 - Virtual Production and Experience (3 Credits)
A course focused on interactive and emerging applications for creating immersive experiences, with a focus on designing VR and in-person experiences using well-known applications, related technologies, methods, and fields including gaming, experience design, virtual painting, augmented reality, museum/interactive installation. Restriction: Sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

FINE 3500 - Installation Art (3 Credits)
Students learn to modify the way a particular space is experienced through material intervention in everyday public or private spaces. Material use incorporates found, fabricated and new media. Prereq: FINE 1100 and FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 1100 and FINE 1500.
Typically Offered: Spring.

FINE 3505 - Environmental Art (3 Credits)
Students create site-specific work to exist in a certain place or describe a specific location. This involves temporary outdoor landscaping combined with sited sculptural elements and gallery exhibition. The formal, political, historical, public, ecological, geographical and social context of the urban/rural environment will be explored. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE-BFA APC: FINE 1500

FINE 3510 - Form and Play (3 Credits)
3D printing, mold making, and soft sculpture using rubber, resins, alginate and plaster to cast and build in metal, resin, glass, synthetics, concrete, plastic, paper and biodegradable materials. Exploration of multiples, life size and small-scale forms with personal imagery. Prereq: FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500
Typically Offered: Fall.

FINE 3515 - Public Art (3 Credits)
Students connect with professional/visiting artists installing public art works in Denver. Public relations, installation techniques, curatorial and administration skills are developed. Students learn to establish, maintain and promote public art collections. Prereq FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq FINE-BFA APC: FINE 1500

FINE 3520 - Sculpture: Contemporary Artists and Concepts (3 Credits)
Provides the art student (sculpture majors and non-majors) with a focused opportunity to look at contemporary sculpture, installation and performance art, and to examine the philosophical issues, processes, and methods, motivating practicing artists today. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3525 - Prototyping Sculpture (3 Credits)
This course will focus on contemporary professional practices and will cover topics such as project planning, an introduction to computer-aided design, fabrication, and digital outsourcing for the production of sculptural works. Prereq: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 1500
Typically Offered: Fall.

FINE 3530 - Electronic Art (3 Credits)
Video, sound and projection in contemporary sculpture. Introduction to sensors and motors and data visualization. A bridge between the digital laboratory and the sculpture studio in the context of object making, gallery and networked media. Prereq FINE-BFA APC: FINE 1500, FINE 3405. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq FINE-BFA APC: FINE 1500, FINE 3405
Typically Offered: Spring.

FINE 3532 - Maquette Design (3 Credits)
A maquette is model created to visualize a larger sculpture or character for inclusion in illustration or animation development. Students work in wide ranging media and a variety of approaches to conceptualize personal 2D, 3D and 4D imagery. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 3550 - Iron Casting (3 Credits)
Students learn traditional and innovative mold making techniques for casting iron. Casting techniques include working with found objects, lost wax, ceramic shell and sand molds. Furnace design and equipment fabrication are researched. Public performance is integral to the class. Prereq: FINE-BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA APC: FINE 1500

FINE 3555 - Concepts in Sculpture (3 Credits)
This course addresses varying topics and trends in sculpture. Students produce work focused on issues in the professional field and develop their voice as an artist through thematic exploration. Course content rotates each semester to cover the dynamics of the field. Prereq: FINE-BFA APC: FINE 1500. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: FINE-BFA APC: FINE 1500

FINE 3556 - Concepts in Studio Art (3 Credits)
This course addresses topics and trends in studio art. Students produce work focused on issues in the professional field and develop their voice as an artist through thematic exploration. Course content adapts to cover the dynamics of the field. Prereq: FINE 1100, FINE 1500 and FINE 2200. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: FINE 1100, FINE 1500 and FINE 2200.
Typically Offered: Fall.

FINE 3557 - Concepts in Illustration (3 Credits)
This course addresses varying topics and trends in illustration. Students produce work exploring contemporary issues in the professional realm and develop their distinctive illustrative voice through multiple media. Course content rotates each semester to cover the dynamics of the field. Prereq: FINE 2010. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE 2010

FINE 3630 - History of Photography (3 Credits)
Students examine the history of photography from its origins to the present. Emphasis is placed on photography as an artistic medium. Topics covered include important movements, photographers, and technical innovations, as well as photographer's broader role in visual culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3631 - Photography: Theory and Criticism (3 Credits)
Students investigate the historical texts of photographic criticism. Readings relate to photography as a fine art form, concentrating on 1970 to the present. Through discussions, readings and critical writing, students examine and appreciate the significance of photographic theory. Spring only. Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing.

FINE 3635 - Photography Now (3 Credits)
Students investigate trends in fine art photography from 1990 through the present. By examining current topics, styles, and techniques students gain insights into contemporary photographic practice and its relationship to the history and future of the medium. Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA PHO: FINE 3630. Restriction: All other students must be at sophomore-, junior-, or senior-level standing.

FINE 3636 - Through the Lens: Photography and Diversity (3 Credits)
Students examine social issues relating to non-dominant cultures, minority groups, biases, and privileges through the lens of photographic imagery. Lectures, discussions, and assignments offer insights into the ways that photography both reflects and impacts attitudes about cultural diversity in the United States. Restriction: Restricted to students with Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.

FINE 3640 - Topics in Art History I: Art Before Modernism (1-3 Credits)
Variable: Art History lecture course pertaining to art before Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 3644 - Topics in Art History II: Modern and Contemporary (1-3 Credits)
Variable: Art History lecture course pertaining to art since Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 3775 - Asian Art After 1850 (3 Credits)
A lecture-based course about developments in art and architecture of China, Japan, and Korea after 1850. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Additional Information: Denver Core Requirement, International Perspectives.

FINE 3807 - Advanced Creature and Quadruped Animation (3 Credits)
This studio course is focused on the foundation creature animation skills practiced in most VFX houses today. Students will explore the process and techniques of keyframe and pose-to-pose animation. Considerations include character performance, behaviors, physical constraints, and motion through space with an emphasis on artistic excellence through applications of current 3D technologies. The focus being believability and nuance learned by careful study of live-action footage. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FINE 3808 - Live Action Compositing (3 Credits)
A studio course focused on the art and science of node-based digital compositing for live-action film and video. Students will develop skills/knowledge about the processes involved in combining, altering and enhancing live action footage using industry standard tools and techniques. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FINE 3814 - Digital 3D Methods: Motion Graphics for Animators (3 Credits)
An online course is an introduction to Motion Graphics, devoted to understanding time based imagery that focuses on utilizing video, typography and 3D content as a creative communication tool. Students will create projects that explore video, animation, time and motion. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3840 - Exploring Storyboarding- Foundational Techniques and Approaches (3 Credits)
Exploring Storyboarding will help you fall in love with making cinema. This course is a foundation to the art and craft of visual storytelling. This course teaches the language film, and techniques for illustrating action, composition, character, and drama.
Grading Basis: Letter Grade

FINE 3841 - Creating Visual Story - Narrative Techniques and Visual Design (3 Credits)
This course explores narrative methods used in animation, film, and connects film theory to visual storytelling. This course empowers you to engage with story process, and understand film theory as an interesting, integral, part of the visual storytelling creative process. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 3842 - Storyboarding for Cinema and Game Previsualization (3 Credits)
A lecture/lab course covering the foundations of the cinematic storyboarding process/techniques used for previsualization in the film, entertainment design and game industries. Students will develop skills/knowledge for creating storyboards study and understand film theory, storytelling, film language and grammar, and filmic composition. Prereq: FINE 3841 or Junior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3841 or Junior standing

FINE 3845 - DAC: Preproduction for Story (3 Credits)
A seminar course focused on the story development/preproduction phases for the DAC senior thesis short. The principle focus of the course will be story development, preproduction activities and organizing the production team and production pipeline for the thesis short. Prereq: DACD 2830 or DACD 2850, Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DACD 2830 or DACD 2850, Acceptance into DAC.

FINE 3850 - DAC: Dynamic Simulation (3 Credits)
A lecture/lab course exploring the theory/techniques of dynamic and particle simulations for 3D content. Students explore how to develop effects (smoke, fire, steam, explosions) and dynamic materials (cloth), with an emphasis on artistic excellence through application of current 3D technologies. Restriction: Restricted to Junior standing or higher. Acceptance into DAC. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.

FINE 3855 - Introduction to Unreal Engine (3 Credits)
Students will learn how to utilize and navigate Unreal Engine to produce interactive stories and immersive environments in a lecture-lab classroom. Students will build virtual worlds that use lighting, surface design, environments, and interactions to tell stories highlighting personal experiences and socially conscious narratives in a virtual production environment. Restriction: Restricted to Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

FINE 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 3995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

FINE 4000 - The Business of Art (3 Credits)
Through research, discussion and projects, students learn marketing, copyright and business practices necessary for a career as an illustrator or artist. Students will develop professional materials, identify potential markets and implement a plan to promote their work. Restriction: FINE-BFA or FINE-BA and junior or senior class standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BFA DRW: FINE 3220, 3230, and 3310

FINE 4001 - Illustration III: Investigative Methods (3 Credits)
Students will learn to use writing, research methods, and market analysis to develop original and unique approaches to illustration. Projects will explore how media choices and production processes impact potential markets and responses from the public. Prereq: FINE 3410. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts & Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3410. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts Media.
Typically Offered: Spring.

FINE 4002 - Illustration IV: Thesis Development (3 Credits)
Students will examine historical and contemporary trends in illustration while developing a research topic and writing a thesis paper. Students will produce new work and illicit responses from faculty and outside industry mentors as they begin to prepare a professional illustration portfolio. Prereq: FINE 4001. Restriction: Restricted to FINE-BFA ILS majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4001. Restriction: FINE-BFA ILS
Typically Offered: Fall.

FINE 4003 - Illustration BFA Thesis (3 Credits)
Students will present their thesis project proposal, create original illustrations for their BFA Thesis exhibition and develop a professional illustration portfolio. Students will be expected to document their process and implement a promotional plan in order to build an audience for their work. Prereq: FINE 4002. Restriction: FINE-BFA ILS. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE 4002. Restriction: FINE-BFA ILS
Typically Offered: Spring.

FINE 4020 - Anatomy for the Artist (3 Credits)
An intensive study of the human figure, focusing on its structure, movement and proportions. Skeletal and muscular systems are explored in depth using the classic texts of artistic anatomy to enhance students' drawings from observation. Prereq: FINE 2030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2030

FINE 4050 - Design in a Global Workplace (3-6 Credits)
Through intensive participatory workshops, study tours, and lectures this class examines the advantages of interdisciplinary community-based collaboration. This class also examines the complexities of cross disciple collaborations including multiple professional agendas, political and business establishments and the needs of the community. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 4140 - Topics in Photography (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FINE 4195 - Advanced Photography I (3 Credits)
Students create an independent body of photographic work that integrates sophisticated concepts with technical mastery. Through critiques, presentations and discussions, students relate subject matter to historical and contemporary context. Students build expertise in the area of professional development in photography. Prereq: FINE-BFA PHO: FINE 3156, 3160, 3171, 3172, and 3630. Prereq: FINE 3161, 3162, 3171. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE-BFA PHO: FINE 3156, 3160, 3171, 3172, and 3630. Prereq: FINE 3161, 3162, 3171
Typically Offered: Fall.

FINE 4196 - Advanced Photography II (3 Credits)
Students create an independent body of photographic work that integrates sophisticated concepts with technical mastery. Through critiques, presentations and discussions, students relate subject matter to historical and contemporary context. Students build expertise in the area of professional development in photography. Prereq: FINE 4195. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: FINE 4195.

FINE 4215 - Interdisciplinary Studio (3 Credits)
This is the first level of advanced studies in art practices where students create a body of work that expresses a more complex individual vision. Students learn to develop their creative work with self-selected materials and processes in support of focused concepts. Prereq: FINE 1100, FINE 1500, and FINE 2200. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 1100, FINE 1500 and FINE 2200.
Typically Offered: Fall.

FINE 4340 - Topics in Studio Art (1-3 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 4350 - Topics in Digital Design (3 Credits)
Specialized topics are offered in new design technologies, theories, processes and conceptual thinking. Course subjects are unique and changing semester to semester. Restriction: Restricted to students with junior standing or higher or with special permission. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall, Spring, Summer.

FINE 4400 - Design Studio III (3 Credits)
Set up as a collaborative studio, students learn to identify problems in the cultural and urban environment and design solutions that address those problems. Through discovery and research students will learn how design can be a catalyst for change. Restriction: Restricted to FINE-BFA DIG or DIGD-MIN or FINE-BFA 3D ANI or SCOM. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to FINE-BFA DIG or DIGD-MIN or FINE-BFA 3D ANI or SCOM.
Typically Offered: Fall.

FINE 4411 - Immersive Storytelling I (3 Credits)
This theory/research-oriented course teaches students in media and technical fields how to tell stories interactively using 360-degree video and computer-generated scenes that subjects experience through leading virtual reality headsets. We will touch on creating content for larger format immersive experiences. Restriction: Sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

FINE 4420 - Interactive Media III (3 Credits)
An advanced interactive design workshop where students will use current industry tools to explore a range of topics such as emerging technologies, design interactive prototypes, and experiential design. Through prototyping, discussion, readings, and critiques, students will create unique projects that explore contemporary and futurist topics. Prereq: FINE 3444. Restriction: Restricted to FINE-BFA DIG. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3444. Restriction: Restricted to FINE-BFA DIG.

FINE 4421 - Virtual Art Direction (3 Credits)
A course that examines the role of the art director in virtual production, including motion pictures, television and game design. This course focuses on the process of world building, and interaction design from the standpoint of the virtual production art director. Students will work on projects that give them hands on experience in virtual art direction for entertainment productions. Restriction: Restricted to Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

FINE 4422 - E-Commerce Web Design (3 Credits)
This course provides an overview of the concepts and principles of e-commerce website design and selling your products online. The content is geared toward design students who would like to build web stores for clients or yourself. By the end of the course, students will be able to create and manage their own online store. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FINE 4425 - Motion III (3 Credits)
An intense workshop-laboratory devoted to advanced motion design techniques. Through creative investigation, the study of motion theory and hierarchy, compositing, filming techniques, broadcast parameters, aesthetics, typography and technical issues students will develop the in-depth knowledge necessary to excel as design professionals. Prereq: FINE 3454. Restriction: Restricted to FINE-BFA DIG. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 3454. Restriction: Restricted to FINE-BFA DIG.

FINE 4434 - Virtual Landscapes (3 Credits)
In a studio environment students will explore place in relation to contemporary digital art practice. Through readings, lectures and production of projects assigned, students will create work that addresses the natural, urban and virtual environment. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-DIG: FINE 3414, 3415, 3424 or FINE-BFA SMD: FINE 3414, 3415, and 3424 or FINE-BFA TRM: FINE 3434 and 3438

FINE 4435 - Nudge: Behavioral Design 1 (3 Credits)
A studio course where students learn to develop 'nudge' solutions through the use of behavioral methods and theories. A 'nudge' is an attempt to influence people's choices and behavior in a predictable way without limiting their options or significantly changing incentives. Through field trips and observation, students will gain knowledge and skills in the field of behavioral design, including dual cognitive processing, choice architecture, behavioral mapping, and cognitive biases. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 4446 - Visualization & Infographics (3 Credits)
In our data and information-rich society, visual representations of data can be useful for making sense of available information and fostering understanding. This course engages students in critique existing work and encourages a thoughtful design process toward creation of information graphics and simple data/information visualizations. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 3015/1015 or FINE-BFA DIG and FINE 3444 or FINE-BFA SMD and FINE 2030, 3444, BIOL 2061 and BIOL 2081 or FINE-BFA ANI: FINE 1820, 2810, and 2830
Typically Offered: Fall.

FINE 4447 - Presenting Science (3 Credits)
Sophisticated graphical components can help a viewing audience understand complex scientific information more clearly. This project-based learning course engages students in creation of thoughtful graphic explanations of science for the purpose of enhancing scientific presentations and audience comprehension. Max hours: 3 Credits.
Grading Basis: Letter Grade

FINE 4448 - BioMedical 3D Animation (3 Credits)
3D Animation can be a powerful tool for telling stories rooted in science and medicine. This course provides opportunity to learn from existing animated works while honing skills in storyboarding, narrative and 3D animation with focus on biology, science, and health education. SMD students explore and research BFA thesis topics. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE-BFA SMD + FINE 3434, 4020 and 4446 Prereq: FiNE-BFA DIG + FINE 3434 and 3444

FINE 4450 - Social Engagement by Design (3-6 Credits)
Through lectures, discussions and conducting onsite research in international settings, students will become familiar with professional practitioners' Perspectives and experiences in the field of socially engaged design while interrogating current practices, policies, and expectations that inform community engagement and by Design. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Summer.

FINE 4480 - Design Thesis Research (3 Credits)
Through lectures, studio visits and research, students will engage the profession and examine the role of the artist as a designer. Projects will focus on resumes, interview techniques, portfolio and business practices to prepare students for entering the design profession. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4400 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Fall.

FINE 4495 - Design Thesis Project (3 Credits)
Through critique, research, and writing students will critically explore a thesis topic and develop professional quality visual solutions. Students will create work that expresses their personal artistic vision in relation to significant contemporary and historical artists and practice. Restriction: Restricted to FINE-BFA DIG. Prereq: FINE 4480. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 4480 Restriction: Restricted to FINE-BFA DIG
Typically Offered: Spring.

FINE 4505 - Sculptural Drawing (3 Credits)
Students apply traditional and mixed media drawing skills, photography and digital reproduction to depict the sculptural object in two and three-dimensional space. Students learn to construct small-scale models and develop sculpture proposals. Drawing as sculpture medium is explored. FINE BFA APC: FINE 1500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: FINE-BFA APC: FINE 1500.
Typically Offered: Spring.

FINE 4515 - Advanced Art Practices (3 Credits)
Students in this course develop a body of work that expresses complex individual vision across media. Students learn to develop their artistic practice with self-directed processes in support of focused concepts in multiple studio areas. Prereq: FINE 1100, FINE 1500, FINE 2200. Coreq: FINE 4950 (BFA Art Practices students only). Restriction: Restricted to undergraduate students with sophomore standing or higher. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 1100, FINE 1500, FINE 2200. Coreq: FINE 4950 (BFA Art Practices students only). Restriction: Restricted to undergraduate students with sophomore standing or higher.
Typically Offered: Fall, Spring.

FINE 4522 - Interdisciplinary Art in Ireland (6 Credits)
The interdisciplinary course introduces students to the methods and concepts of contemporary site-specific art as critical theory through lecture and critique and as practice in the rural/urban landscape and studio along Ireland's County Clare coastline in the Burren region. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Global Education Study Abroad.

FINE 4523 - Topics in Art History I: Art Before Modernism (1-3 Credits)
Variable: Art History lecture course pertaining to art before Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4524 - Topics in Art History II: Modern and Contemporary Art (1-3 Credits)
Variable: Art History lecture course pertaining to art since Modernism.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4525 - Museum Studies (3 Credits)
A seminar about museums and art galleries as institutions for the preservation and exhibition of cultural materials. Through writing assignments, discussions, site visits, and analysis, students will demonstrate knowledge and critical thinking on the display of art.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4600 - History of Modern Design:Industrial Revolution-Present (3 Credits)
A lecture course involving the history of design from the Industrial Revolution to the present. The course will address the graphic design, typography, architecture, "Decorative arts", and new media from each period/major design movement in that time frame. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4610 - Pre-Columbian Art (3 Credits)
A lecture course on the art and architecture of Mesoamerica and the Andes before the Spanish conquest. Through visual analysis, vocabulary acquisition, discussion, exams, and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Cross-listed with FINE 5610. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4620 - American Art (3 Credits)
A lecture course on the art of the United States from colonial times to World War II. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4630 - History of Latin American Art:1520-1820 (3 Credits)
A lecture course studying Latin American art of 1520-1820, including major artists and periods. Through visual analysis, vocabulary acquisition, exams, and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the arts.
Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.
Cross-listed with FINE 5630. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4670 - Greek and Roman Art (3 Credits)
A lecture course on art and architecture from ancient Greece and Rome. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only.
Restriction: All other students must be at junior- or senior-level standing.

FINE 4680 - Art of the Medieval Multiverse (3 Credits)
A lecture course critically examining the art and architecture of an expansively defined medieval world across themes including geographies and peoples, materials, identities and medievalisms. Through close engagement with artworks and texts, students will gain new perspectives on the diversity of medieval art. Prereq: Visual Arts majors: FINE 2600 (Art History Survey I) and FINE 2610 (Art History Survey II) or permission of the instructor. All other students must be of junior or senior standing or have the permission of the instructor. Cross-listed with FINE 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Visual Arts majors: FINE 2600 FINE 2610 or permission of the instructor; all other students must be of junior or senior standing or have the permission of the instructor.
Typically Offered: Fall, Spring.

FINE 4700 - Italian Renaissance Art (3 Credits)
A lecture course about developments in Italian Renaissance art and architecture. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4705 - Northern Renaissance Art (3 Credits)
A lecture course about developments in Northern Renaissance art and architecture. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4710 - Baroque and Rococo Art (3 Credits)
A lecture course on Italy, Spain, France, England, and the Netherlands during the seventeenth and eighteenth centuries. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4712 - Applied Digital Media (1-3 Credits)
This lab course provides students with the opportunity to execute practical applications in the use of digital 3D media for commercial and/or non-profit venue. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

FINE 4715 - Islamic Art and Architecture (3 Credits)
A lecture course on art and architecture of the Islamic world from the emergence of Islam in the 7th century to c. 1850. Students will engage in visual and contextual analyses, object-based research, and vocabulary acquisition. Prereq: Visual Arts Majors (FINE-BFA) - FINE 2610 with a C or higher. All other students must be of junior standing, or have permission of the instructor to enroll. FINE 2610 with a C or higher. All other students must be of junior standing or have permission of the instructor to enroll. Cross-listed with FINE 5715. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE BFA: FINE 2610 with a C or higher. All other students must be of junior standing or have permission of the instructor to enroll.
Typically Offered: Fall.

FINE 4730 - Arts of Japan (3 Credits)
A lecture course on selected themes and periods in Japanese art. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4750 - Arts of China (3 Credits)
A lecture course on selected themes and periods in the arts and architecture of China. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4770 - Art of India and Southeast Asia (3 Credits)
A lecture course on selected themes and periods in the arts of India and Southeast Asia. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4790 - Methods in Art History (3 Credits)
A seminar about the various research methodologies in the history of art. Through reading, discussion, research,writing assignments, and presentations, students will demonstrate knowledge of art historiography. Prereq: FINE-BA: FINE 2600 and FINE 2610; ENGL 2070 or ENGL 3084 or ENGL 4180 or ENGL 4280. Prereq: FINE-BFA: FINE 2600 and FINE 2610. All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE-BA: FINE 2600 and FINE 2610; ENGL 2070 or ENGL 3084 or ENGL 4180 or ENGL 4280. Prereq: FINE-BFA: FINE 2600 and FINE 2610. All other students must be at junior- or senior-level standing.
Typically Offered: Fall.

FINE 4825 - Architectural Visualization (3 Credits)
A lecture/lab course covering the 3D visualization of architectural projects. Students will develop skills/ knowledge about the techniques for creating realistic 3D models, texturing, lighting, and presentation. Special emphasis will be placed creating realism in modeling, materials, lighting, and professional renderings. Prereq: FINE 1820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 1820

FINE 4840 - Independent Study: FINE (1-3 Credits)
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FINE 4950 - Studio BFA Thesis (3 Credits)
Studio: BFA Thesis involves the preparation, exhibition and critical faculty response to students' Creative work. Course work focuses on contemporary trends in the arts, the commerce of the arts and the professional practices necessary to an artist' Self-promotion. Coreq: FINE 4515 (BFA Art Practices students only). Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Coreq: FINE 4515 (BFA Art Practices students only).

FINE 4951 - Bachelor of Art Thesis (3 Credits)
A seminar that emphasizes creative and original research through the composition of a substantial paper on a topic in art history. Through discussion, presentations, and individual readings, students will demonstrate skills in research, writing, and critical thinking. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: FINE 4790 Restriction: Restricted to FINE-BA majors with a sub-plan of ART within the College of Arts and Media.

FINE 4970 - Modernist Art (3 Credits)
A lecture course about developments in Modernist art and architecture from the late 18th century to 1960. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of the period's historical developments and an ability to analyze its art. Prereq: FINE 2600 and FINE 2610 for FINE-BA and FINE-BFA majors ONLY. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4980 - Gender in Contemporary Art (3 Credits)
This lecture course will address ways in which gender issues have affected the creation and study of visual arts since the early 20th century, with an emphasis on art and culture since World War II. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.
Typically Offered: Fall, Spring.

FINE 4981 - History of Tattoos and Body Art (3 Credits)
From prehistoric traditions to modern revivals, tattooing has proved to be an enduring feature of artistic practice. The seminar will analyze examples of tattoos from different cultures and contexts, so as to understand the variety in form and function. Prereq: FINE 2600: Art History Survey I and FINE 2610: Art History Survey II. Cross-listed with FINE 5981. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FINE 2600 and FINE 2610.

FINE 4990 - Contemporary Art: 1960 to Present (3 Credits)
A lecture course about developments in art and architecture since 1960. Through visual analysis, vocabulary acquisition, discussion, exams and writing assignments, students will demonstrate knowledge of historical developments and an ability to analyze the art. Prereq: FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq FINE 2600 and FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing.

FINE 4993 - Topics Seminar in Art History I: Art before Modernism (3 Credits)
Variable: Art History seminar pertaining to art before Modernism. Prereq: FINE 2610 for FINE-BA and FINE-BFA majors ONLY. Restriction: All other students must be at junior- or senior-level standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq FINE-BFA/FINE-BA: FINE 2610

FINE 4994 - Topics Seminar in Art History II: Modern and Contemporary Art (3 Credits)
Variable: Art History seminar pertaining to Modern and contemporary art. Prereq: FINE 2610 for FINE-BA or FINE-BFA majors only. Restriction: All other students must be at junior- or senior-level standing. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq FINE-BFA/FINE-BA: FINE 2610

FINE 4995 - Travel Study (1-15 Credits)
Created for students doing travel study in a foreign country. Students register through the Office of International Education. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

French (FREN)

FREN 1000 - Introduction to Cultures of the French- Speaking World (3 Credits)
Introduces students to the many cultures of the French-speaking world. Taught in English for accessibility to students from different colleges at the University. The countries studied are: France, its overseas departments (Guadeloupe and Martinique) and territories (Tahiti); Quebec; Senegal; and other African countries. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

FREN 1001 - French Language I (4 Credits)
Introductory course in French language skills, in which basic grammatical structures are introduced, together with elementary vocabulary and cultural items that allow the student to carry on simple conversations in French. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. No previous study of French is required. No co-credit with FREN 1010. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 1002 - French Language II (4 Credits)
Second semester of elementary French language skills continuation of French Language I (FREN 1001). More complex grammatical structures are introduced together with appropriate vocabulary and cultural and literary readings that allow students to carry on more complex conversations. Note: This course assumes that students have passed FREN 1001 or 1010 or equivalent, or have taken one year of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 1020. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 1020 - Beginning French II (5 Credits)
(Continuation of FREN 1010.) More complex grammatical structures are introduced, and literary and cultural readings are added. Elementary vocabulary and cultural awareness are expanded to enable the student to carry on more complicated conversations. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed FREN 1001 or 1010 or equivalent, or have taken one year of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. This course is not intended for native speakers. Max hours: 5 Credits.
Grading Basis: Letter Grade

FREN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

FREN 2001 - Second-Year French (3 Credits)
FREN 2001 Third semester of French language skills- continuation of French Language II (FREN 1002). Further introduction to beginning & intermediate level grammatical structures with appropriate vocabulary and cultural & literary readings that allow students to understand oral & written French and to speak & write in French in everyday situations. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 2003 - French Language III (3 Credits)
Third semester of French language skills- continuation of French Language II (FREN 1002). Further introduction to beginning & intermediate level grammatical structures with appropriate vocabulary and cultural & literary readings that allow students to understand oral & written French and to speak & write in French in everyday situations. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 2110. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

FREN 2004 - French Language 4: Introduction to Advanced Studies (3 Credits)
This course is designed to review and further develop French language skills, to continue the study of Francophone cultures and to prepare students for advanced-level French studies. Note: This course assumes that students have passed FREN 2003 or 2110 or equivalent, or have taken three years of high school French, or possess equivalent proficiency. A grade of Cor higher in the previous French course is recommended for success in this course. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. This course is not intended for native speakers. No co-credit with FREN 2020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

FREN 2110 - Intermediate French I: Grammar Review, Reading and Composition (3 Credits)
Designed to further develop all the language skills, with particular emphasis on reading and writing, and to further continue students' introduction to French culture. Students review grammar and vocabulary, read and discuss Le Petit Prince, and express their reactions to the text both orally and in writing. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed FREN 1002 or 1020 or equivalent, or have taken two years of high school French, or possess equivalent proficiency. A grade of C- or higher in the previous French course is recommended for success in this course. This course is not intended for native speakers. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 3010 - French Phonetics and Pronunciation (3 Credits)
Helps students acquire speech habits through knowledge of phonetics. Topics include the function of the speech organs, accurate production and recognition of sound, and the use of phonetic symbols. Note: Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3020 - Conversation through Film (3 Credits)
Conversation course focusing on the exploration of the diversity of French and Francophone cultures through film. Oral practice methodologies will include small group discussions, short oral presentations and debates. Note: Students with native or nearnative-level proficiency will not be allowed to take FREN 3020. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3050 - Advanced Grammar and Composition (3 Credits)
Rigorous review of grammar (including past and future tenses, conditional mood and nominal phrase), along with development of writing skills through analysis and discussion of selections from French writers. Through questions and written exercises, students familiarize themselves with vocabulary, spelling, syntax and grammar. Note: May be taken before or after FREN 3060. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3060 - Advanced French Language Skills (3 Credits)
Rigorous review of grammar (including subjunctive, interrogative, verbal phrase and passive voice), along with development of writing skills through analysis and discussion of selections from French writers. Through questions and written exercises, students familiarize themselves with vocabulary, spelling, and grammar. Note: May be taken before or after FREN 3050. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3112 - Survey of French Literature I (3 Credits)
Introduces survey of the major literary trends and prominent writers of French literature from 842 A.D. to the end of the 18th century. Note: May be taken before or after FREN 3122. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3120 - French Cultural Identities: Myths and Realities (3 Credits)
The self-assured demeanor of the average French man or woman both attracts and confounds. In fact, a French person's behavior -- or that of the French government -- can seem impossible to decode if not understood within an authentically French context. This course examines that context and explores how the French view everyday life. Includes analysis of classic French films. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 3122 - Survey of French Literature II (3 Credits)
Introduces survey of the major literary trends (romanticism, realism and existentialism) and writers of the 19th and 20th centuries. Students become acquainted with prominent writers of the period such as Beauvoir, Chateaubriand, Hugo, Balzac, Flaubert, Proust, Camus and Sartre. Note: May be taken before or after FREN 3112. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3130 - Current Topics of the French-Speaking World (3 Credits)
Combines discussion and writing on political, economic, and social conditions in contemporary France and the Francophone world. Articles from current French newspapers, news magazines, television broadcasts, and the World Wide Web are analyzed for a better understanding of modern French culture. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: fall term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 3140 - Contemporary Francophone Cultures (3 Credits)
Through the reading of short stories and cultural texts, engages students in the exploration of cultures of the Francophone world. Addresses political, economic and geographic status of each region as well as societal identity, immigration, the individual and cultural identity. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Term offered: spring term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 3200 - The Francophone World in the Post-Colonial Era (3 Credits)
Focuses on the many Francophone regions of the world, including (but not limited to) France, North and West Africa, Southeast Asia, and the Caribbean, and surveys a wide span of subject matter as it pertains to the post-colonial situations in these regions. Taught in English. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq: Sophomore standing or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

FREN 3840 - Independent Study: FREN (1-3 Credits)
Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

FREN 3939 - Internship (1-3 Credits)
Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

FREN 3970 - Special Topics (3 Credits)
Varying topics in French and Francophone language, literature and culture appropriate to the 3000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed FREN 2004 or 2120 or equivalent, or have taken four years of high school French, or possess equivalent proficiency. Note: May be taken more than once, provided that the topic is different each time. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FREN 3995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

FREN 4010 - Advanced Composition: Stylistics (3 Credits)
Focuses on improvement of writing skills and development of the student's ability to compose logically and convincingly. The writing styles to be studied include: narration, description, portrait, persuasive essay and report. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4050 - Advanced French for Business (3 Credits)
Concentrates on the technical language necessary to meet the economic and commercial needs of the modern world. Prepares students for the practical certificate of business and economic French of the Paris Chamber of Commerce. Note: Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4082 - Introduction to Translation (3 Credits)
Introduces the methodology and practice of written translation from English to French/French to English. Students will learn techniques on how to avoid word by word translation, faulty sentence structure and anglicisms by focusing on grammar, syntax and vocabulary. Note: Students must demonstrate third-year competence and advanced writing skills in English. Students with native or near-native level proficiency in French must consult with the French advisor before enrolling in this course. These students may, in some cases, take this course. The instructor of the course and/or the French advisor reserve the right to determine the level of linguistic proficiency of the student and his or her admission to the class by means of an oral interview and/or placement exam scores. Note: This course assumes that students have passed FREN 3050 or 3060 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5082. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4200 - French Civilization Through the Nineteenth Century (3 Credits)
Development of French culture and civilization from a historical perspective, beginning with the origins of France and continuing through the 19th century. Includes historical background, sciences and techniques, daily life, the arts, literature and philosophy, and religion. Note: May be taken before or after FREN 4210. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed two 3000 level courses in French. Term offered: spring term of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

FREN 4210 - French Civilization - Twentieth and Twenty-First Centuries (3 Credits)
(Continuation of FREN 4200) The development of French culture and civilization in a historical perspective from the beginning of the 20th century to the present. Includes historical background, sciences and techniques, daily life, the arts, literature and philosophy, and religion. Note: May be taken before or after FREN 4200. Note: This course assumes that students have passed two 3000 level courses in French. Term offered: fall term of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4310 - Seventeenth Century Literature (3 Credits)
An in-depth study of the century considered to be the pinnacle of French theatre. Includes plays by Racine, Moliere and Corneille, as well as poetry by Lafontaine and Boileau. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4360 - Eighteenth Century Novel, Theater and Poetry (3 Credits)
Studies several novels and plays characteristic of the 18th century as well as some of the more famous poems. Includes Diderot, Rousseau, Voltaire, Marivaux and Laclos. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4430 - Nineteenth Century French Novel (3 Credits)
Development of the French novel during the 19th century. Includes such writers as Stendhal, Hugo, Balzac, George Sand, Flaubert, Maupassant and Zola. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5430. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4480 - Twentieth Century French Novel (3 Credits)
Represents novels of the 20th century, a period of great innovation in the French novel. Authors generally treated are Camus, Giono, Ernaux and Duras. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5480. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4490 - Twentieth Century French Theater (3 Credits)
Surveys the major movements in French literature of the 20th century as represented in the theater arts. Such authors as Jarry, Artaud, Apollinaire, Giraudoux, Sartre, and Beckett are discussed. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4510 - French Women Writers (3 Credits)
Designed to explore writings by French and Francophone women from the Middle Ages to the present. Addresses the question of what it means to be a woman and want to write. The selections include a wide variety of genres: autobiographical writings, stories, poems, manifestos, letters, political and historical documents. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5510 and WGST 4511/5511. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4520 - Voices of Haiti and the Caribbean (3 Credits)
This course explores the literary production of contemporary Haitian and Caribbean writers within varied cultural and gender contexts. It focuses on historical, societal and post-quake issues confronting both men and women writers of the French Caribbean. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 5520. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

FREN 4600 - History of the French Language (3 Credits)
Studies phonological, morphological, and syntactic changes in the language of Gaul from Latin to modern French. Note: This course assumes that students have passed FREN 3010 and FREN 3050 or 3060 or equivalent courses. Cross-listed with FREN 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade

FREN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

FREN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

FREN 4840 - Independent Study: FREN (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

FREN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

FREN 4970 - Special Topics (3 Credits)
Varying topics in French and Francophone language, literature and culture appropriate to the 4000 level, not otherwise covered by regular courses. Note: This course assumes that students have passed two 3000 level courses in French. Note: May be taken more than once, provided that the topic is different each time. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

FREN 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

Geography (GEOG)

GEOG 1102 - World Regions Global Context (3 Credits)
Analyzes world regions and their global interconnectedness, including the dynamic and complex relationships between people and the world they inhabit. Demographic and cultural (political, economic, and historic) issues are examined as well as interactions between human societies and natural environments. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring, Summer.

GEOG 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

GEOG 1202 - Introduction to Physical Geography (3 Credits)
The science that studies the processes, forms, and spatial or geographic structures of natural systems operating at or near the earth's surface, including weather, climate, and landform processes. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

GEOG 1302 - Introduction to Human Geography (3 Credits)
Systematic introduction to basic concepts and approaches in human geographic analysis. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

GEOG 1602 - Urban Studies and Planning (3 Credits)
Surveys the process of urbanization, emphasizing the development of American cities, using Denver as an example. Topics covered include: evolution of metropolitan form/land use patterns, cultural landscape formation, city planning and architectural design, and urban social and policy issues. Note: This course is a prerequisite for GEOG 4680 Urban Sustainability: Perspectives and Practice AND GEOG 4640 Urban Geography Denver and the US. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

GEOG 2080 - Introduction to Mapping and Map Analysis (3 Credits)
Studies major elements in the preparation of thematic maps, including sources of data collection and manipulation of data, and cartographic techniques for display of data. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

GEOG 2202 - Hazards to Disasters: Perception and Management (3 Credits)
Surveys those physical phenomena that often cause substantial damage when they occur in areas of human settlement. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS2, Soc Behav Sci: Geography.
Typically Offered: Fall, Spring, Summer.

GEOG 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

GEOG 3100 - Geography of Colorado (3 Credits)
An analysis of the physical environment, history of settlement, and resource base of Colorado in relation to present economic patterns of the state. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3110 - Geography of North America (3 Credits)
Systematic study of the physical, cultural, economic, and political relationships that shape the landscape of the United States, Canada, Greenland, and the U.S.-Mexico Borderlands. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3120 - Geography of Europe (3 Credits)
An analysis of the physical environment, resource utilization, economic development and cooperation in Europe. A cultural and political geography which focuses on continuity and change in Eastern and Western Europe. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3130 - Central America and the Caribbean (3 Credits)
Surveys the physical environment and cultural development of Central America and the Caribbean Islands. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3140 - Geography of South America (3 Credits)
The physical environment, cultural development, and political instability within the area are analyzed. Influence of the landscape and climate, as well as Iberian cultural and land tenure patterns on historic settlement and modern growth are discussed. Problems associated with population, economics, politics, education, and geography are emphasized. Term offered: spring. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 3150 - Middle East (3 Credits)
Physical, cultural, and economic approach to the arid lands of the Middle East, including Arab land of the Sahara. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3160 - Geography of China (3 Credits)
Geographic survey of the physical, cultural, and economic features characterizing the geography of China. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3232 - Weather and Climate (3 Credits)
Introduces the processes and systems that govern both day-to-day weather and longer-term climate variations. Covers instrumentation and weather forecasting techniques. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with ENVS 3232. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

GEOG 3240 - Colorado Climates (3 Credits)
Provides a broad overview of the various weather and climate patterns that are found within the state of Colorado. To accomplish this, the state of Colorado will be divided into regions which (hopefully) have a large degree of homogeneity in terms of weather and climate controls. Note: Taught in a seminar style with students giving presentations and reports on their findings about a given region. Prereq: GEOG 3232 with a C- or higher, or instructor permission. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.
Typically Offered: Spring.

GEOG 3401 - Geography of Food and Agriculture (3 Credits)
An overview of food systems and agriculture as they impact an increasingly urbanized planet. We will survey historical food production and preservation, food justice and insecurity, land-use and preservation, as well as local and global systems of distribution and consumption. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 3412 - Globalization and Regional Development (3 Credits)
Addresses global political-restructuring and its implications for regional development in the U.S. Both historical and contemporary processes of globalization are examined. Topics include: the environmental basis of American industrial growth, the relationship between technological change and geographical shifts, the rise and decline of Fordism, the transfer of Japanese manufacturing methods to the U.S., the role of regional and national industrial policy, and the social consequences of globalization for labor and communities. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Students will not earn credit for GEOG 3412 if they have already earned credit for GEOG 3411. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

GEOG 3430 - Geography of Tourism (3 Credits)
Geographic analysis of trends in recreation, travel, and tourism, and their economic, social, and environmental impacts. Examines growth and change in resorts and tourist destination areas. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: this course assumes that students have completed GEOG 1302 or GEOG 3411. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3501 - Geography of Health (3 Credits)
Offers a critical geographic perspective to human health issues, examining disease distributions, how changing relationships between people and their environments (natural, built, and social environments) influence health, and different approaches to the study of health in geography. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 3840 - Independent Study: GEOG (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOG 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

GEOG 3990 - Special Topics (3 Credits)
Investigation of current topics in geography such as analysis of issues (crime, public transportation), techniques (socioeconomic impact analysis), or areas of specialization (climatology). Note: specific necessary prior coursework varies with each topic; students are expected to have completed at least six hours in relevant social or physical science coursework. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOG 4010 - Landscape Biogeochemistry (3 Credits)
A holistic approach to studying the role chemical elements play in synthesis/decomposition cycles, and the resultant environment from interaction of the lithosphere with the hydrosphere, atmosphere, biosphere, and pedosphere during geological, and ecological timeframes, together with anthropogenic activities. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher, or instructor permission. Cross-listed with GEOL 4010/ENVS 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Spring.

GEOG 4020 - Earth Environments and Human Impacts (3 Credits)
This course examines the multitude of impacts that humans have exerted on Earth's biomes and physical environment in a systems context, including vegetation, animals, soils, water, landforms and the atmosphere. It considers the ways in which climate changes and modifications in land cover have altered the environment, and how such changes will still accelerate in in coming decades. The course also explores emergent topics such as rewilding, novel and no analogue ecosystems, and ecosystem services. Additionally, it assesses the future impact of a growing human population on the planet within a context of the "anthropocene," an era dominated by human activity. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with ENVS 5020, GEOL 4020. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.
Typically Offered: Fall.

GEOG 4060 - Remote Sensing I: Introduction to Environmental Remote Sensing (3 Credits)
An in-depth treatment of the use of aerial photographs and other forms of imagery for the analysis of urban-industrial patterns, vegetation, agriculture, landforms, and geologic structure. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 2080 with a grade of C or better. Cross-listed with GEOG 5060. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 2080 with a grade of C or better
Typically Offered: Fall, Spring, Summer.

GEOG 4070 - Remote Sensing II: Advanced Remote Sensing (3 Credits)
Focuses on digital image processing of satellite and aerial images. Students explore the nature of digital image data, gain an understanding of image analysis using PCs, and learn about the use of analysis products in the development of GIS databases. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4060/5060 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5070. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4060 or GEOG 5060 or GEOL 4060 or GEOL 5060, with a grade of C or better
Typically Offered: Spring.

GEOG 4080 - Introduction to GIS (3 Credits)
Introduces Geographic Information Systems (GIS), including justification, hardware/software, database design, and data conversion. GIS is a computer-based mapping system providing a graphical interface to locational and relational attribute data. Includes hands-on use of a GIS workstation. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 2080 or LDAR 4432/5532 with a C or higher. Cross-listed with GEOG 5080. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 2080 or LDAR 4432/5532 with a C or higher.
Typically Offered: Fall, Spring, Summer.

GEOG 4081 - Cartography (3 Credits)
Provides an introduction to the art and science of cartography (map making). Students will learn about design principles, tools and techniques of map production, culminating in the creation of a high-quality map through hands-on exercises. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better. Cross-listed with GEOG 5081. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Fall, Spring.

GEOG 4085 - GIS Applications for the Urban Environment (3 Credits)
Takes a more detailed look at basic concepts presented in the introductory GIS course, concentrating on how GIS is used to solve real-world geographic problems. Various GIS applications within both the natural and social sciences are highlighted. The selection of specific topics is flexible, based on the interests of enrolled students. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5085. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4086 - FOSS4G Systems Integration (3 Credits)
Focuses on the integration of different FOSS4G (Free and Open Source Software for Geospatial Applications) software and technologies to create geospatial information systems that access data from different sources, storage structures, and formats to provide information to support decision making processes. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4091 or 5091, and GEOG 4092 or 5092 with a C or higher. Cross-listed with GEOG 5086. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4091 or 5091, and GEOG 4092 or 5092 with a C or higher.

GEOG 4090 - Environmental Modeling with Geographic Information Systems (3 Credits)
Applies raster spatial analysis and modeling to study processes and spatial relationships to support decision making in natural and built environments. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, or permission of instructor. Cross-listed with GEOG 5090. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Fall.

GEOG 4091 - Open Source Software for Geospatial Applications (3 Credits)
Students will master the individual use and integration of a stack of the most powerful Free and Open Source Software for Geospatial Applications (FOSS4G) to analyze spatial problems and create Spatial Data Infrastructures in different technological, socio-economic and organizational settings. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better, or permission of the instructor. Cross-listed with GEOG 5091. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4092 - GIS Programming and Automation (3 Credits)
Students will learn the most commonly used programming language to automate GIS geoprocessing tasks and workflows in the latest versions of the most popular GIS systems. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Cross-listed with GEOG 5092. Prereq: grade of B- or higher in GEOG 4080 or 5080 or similar course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: grade of B- or higher in GEOG 4080 or 5080 or similar course
Typically Offered: Fall.

GEOG 4095 - Deploying GIS Functionality on the Web (3 Credits)
Covers the core principles and technologies that allow the deployment of geographic information system (GIS) functionality over the World Wide Web. Hands-on exercises make use of the latest commercial software as well as open source technologies. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Prereq: GEOG 4080 or GEOG 5080 or CVEN 5381 with a grade of C or better, computer science background, or permission of instructor. Cross-listed with GEOG 5095. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 4080 or 5080 or CVEN 5381 with a grade of C or better
Typically Offered: Spring.

GEOG 4220 - Environmental Impact Assessment (3 Credits)
The objective of this course is to provide the foundation for understanding the environmental impact assessment process, its legal context, and the criteria and methods for procedural and substantive compliance. Cross-listed with GEOG 5220, URPL 6549. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4230 - Hazard Mitigation and Vulnerability Assessment (3 Credits)
Examines hazard mitigation and its planning and policy implications, emphasizing how vulnerability assessments play an integral role. Students explore how mitigation minimizes the impacts from hazards and use GIS to conduct a local study. Cross-listed with GEOG 5230. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4235 - GIS Applications in the Health Sciences (3 Credits)
Examines how GIS is used throughout the health care industry and public health. Covers environmental health, disease surveillance, and health services research. Students critically review current literature and gain hands-on experience with GIS software. Note: Students must complete this course with a B- or better to apply the credit to a GIS certificate or stacked credential. Note: this course assumes that students have completed GEOG 4080 or GEOG 5080 and/or have a background in public health. Cross-listed with GEOG 5235, HBSC 7235. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4240 - Applied Geomorphology (3 Credits)
Uses hands-on tasks and field trips to investigate processes behind Earth's changing landforms in a variety of physical landscapes(aeolian, volcanic, coastal, fluvial, karst, glacial and periglacial) as related to rock decay, soils and climatic forcings. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOL 4240, 5240 and GEOG 5240. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4251 - Fluvial Geomorphology (3 Credits)
Examines interactions between Earth's surface and flowing water across spatial and temporal scales. Considers structure and function of the major components of fluvial systems, with particular attention to the variety of fluvial systems to hydrologic, geologic and anthropogenic controls. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. GEOG 3232 is strongly recommended, though not required. Cross-listed with GEOG 5251, GEOL 4251 and GEOL 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4260 - Energy and Natural Resource Planning (3 Credits)
This course provides an overview of the issues associated with energy and natural resource planning. Topics include: energy policy; alternative energy development; water resources; extraction/mining; natural resource protection and regulation; resource management, policies, politics, and technologies. Cross-listed with URPL 6510. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4265 - Sustainability in Resources Management (3 Credits)
Sustainability and sustainable development are the dominant economic, environmental and social issues of the 21st century. Follows a multi-disciplinary approach to these concepts. Case studies demonstrate their implementation in different geographical, ecological and socio-economic conditions worldwide. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq: ENVS 1044 and ENVS 1045 or ENVS 1042 with a C- or higher. Cross-listed with GEOG 5265. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: ENVS 1044 and ENVS 1045 or ENVS 1042 with a C- or higher.

GEOG 4270 - Glacial Geomorphology (3 Credits)
Provides an in-depth view of the processes and systems found in glacial environments. Topics include: evidence of past glaciation; present-day glacial extent; glacier dynamics; glacial erosional processes and landforms; glacial depositional processes and landforms. Note: this course assumes that students have completed GEOG 1202 or GEOL 1072. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOG 5270, GEOL 4270 and GEOL 5270. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOG 4280 - Environmental Hydrology (4 Credits)
Examination of hydrologic processes in relation to climate, soils, vegetation, land-use practices, and human interactions. Natural scientific perspectives emphasized; field and laboratory included. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with GEOL 4280 and ENVS 5280. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.

GEOG 4301 - Population, Culture, and Resources (3 Credits)
World populations are examined in the context of local, regional and global resources. Opposing viewpoints are studied, and students are required to complete a case study of self-selected country. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Students may not receive credit for this course if they have already received credit for GEOG 3301. Prereq: GEOG 1302 or ENVS 1342 with a C- or higher or instructor consent. Cross-listed with GEOG 5301. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 1302 or ENVS 1342 with a C- or higher or instructor consent.
Typically Offered: Fall, Spring.

GEOG 4305 - Water Quality and Resources (3 Credits)
Introduces water resources aimed at students with little or no background in the field. This is a broad course covering topics ranging from the physical aspects of water to water politics and international law. While the course is largely a lecture format, discussion of current issues is a significant part of the class. Cross-listed with ENVS 5305. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4335 - Contemporary Environmental Issues (3 Credits)
Provides an overview of environmental challenges facing society today, focusing on how humans impact and change the environment. Opposing views and environmental policy at the local, state, national, and international levels are explored. Cross-listed with GEOG 5335. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4350 - Environment and Society in the American Past (3 Credits)
Overview of the geographical development of North American society from the late 15th century to the mid-20th century. A comparative regional approach emphasizing relationships between natural resource exploitation, cultural landscape formation and environmental change. Cross-listed with GEOG 5350. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4380 - Anthropocene Futures (3 Credits)
We are living in the "Anthropocene"—an era of rapid environmental and societal changes, and of decline and loss resulting from accelerating human interactions with Earth systems. Warming climates, wildfires, floods, water and food insecurity, novel ecosystems, and even pandemics such as COVID-19, are phenomena of the Anthropocene. With a still growing human population and a finite planet, understanding and overcoming such challenges is more pressing than ever, if people are to co-evolve with Earth toward a sustainable future. This interdisciplinary seminar course tells the scientific story of humanity's intensifying interactions with the planet and explores possible future paths. Through presentations, readings and discussion, students will examine topics that include the origin and significance of Anthropocene in Earth's evolutionary history, the debates and evidences for a new geologic epoch, large-scale trajectories of environmental change, a safe operating space, and planting seeds for a "good" Anthropocene. In doing so, students will acquire skills and experiences in critical thinking and analytical reasoning to grapple with many uncertainties and tensions of the Anthropocene. Cross-listed with GEOG 5380, ENVS 4380, and ENVS 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4420 - The Politics of Nature (3 Credits)
Examines how economic systems, scientific discovery, institutional policies, and environmental knowledge converge to shape the environment and mediate the way societies understand, manage and respond to environmental changes in both the United States and the developing world. Cross-listed with GEOG 5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4440 - Science, Policy and the Environment (3 Credits)
Examines the social, economic and political forces shaping scientific discovery and the development and enforcement of environmental policy. Students will examine perspectives on issues such as risk, expertise, uncertainty and objectivity that influence the problem-defining, standard-setting and policy-making process. Cross-listed with GEOG 5440. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4450 - Urban Food and Agriculture: Perspectives and Research (3 Credits)
Provides an overview of research & practices in urban farming. Critically reviews emergent models of local food production/distribution. Compares new practices to traditional agribusiness. Assesses the prospects for solving sustainability problems within the modern agro-food system. Cross-listed with ENVS 5450. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4460 - Sustainable Urban Agriculture Field Study I (3 Credits)
Provides a field-based overview of urban farm planning & management. Topics: range/land conservation, native/invasive species, water distribution, animal husbandry, government interaction, local markets, community relations, conservation easements and issues pertaining to urban farming. Note: this course assumes that students have completed GEOG 4450. Cross-listed with ENVS 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4470 - Sustainable Urban Agriculture Field Study II (3 Credits)
Provides a field-based overview of current practices in local agricultural production. Emphasis will be placed on sustainable practices and their most efficient situation, Special consideration will be given to plausible solutions for food insecure communities both local and global. Note: this course assumes that students have completed GEOG 4450 and 4460. Cross-listed with ENVS 5470. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4625 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color – all fought for their own "right to the city". Cross-listed with HIST 4225, HIST 5225, WGST 4225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOG 4640 - Urban Geography: Denver and the U.S. (3 Credits)
Uses a combined lecture/seminar format to explore research themes in urban geography. Topics covered include both historical and contemporary processes of urban development and transformation. Particular emphasis is placed on the U.S. and Colorado's Front Range. Cross-listed with GEOG 5640. Prereq: GEOG 1602 with a grade of C- or higher or permission from instructor. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 1602 with a grade of C- or higher.
Typically Offered: Spring.

GEOG 4680 - Urban Sustainability: Perspectives and Practice (3 Credits)
Examines various perspectives on sustainability, including ambiguities and opportunities of sustainability as a conceptual framework. Class also examines what sustainability looks like in practice, using numerous topics such as poverty and urban farming to water and climate change. Cross-listed with GEOG 5680. Prereq: ENVS 1342 or GEOG 1602 with a grade of C- or higher or permission from instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1342 or GEOG 1602 with a grade of C- or higher.
Typically Offered: Fall.

GEOG 4710 - Disasters, Climate Change, and Health (3 Credits)
Provides a review of the impacts of disasters and climate change on human health, using a broad framework of preparedness, mitigation, response, recovery, and adaptation. Note: this course assumes that students have completed GEOG 3501. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4720 - Climate Change: Causes, Impacts and Solutions (3 Credits)
Examines science behind past, present & future climate change & environmental, social & political implications & solutions. Explores recent scientific research, syntheses & mainstream literature advancing knowledge about causes & consequences of natural & anthropogenic climate change. Prereq: GEOG 3232 with a C- or higher. Cross-listed with GEOG 5720/ ENVS 4720/ ENVS 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOG 3232 with a C- or higher.

GEOG 4731 - Mountain Biogeography (4 Credits)
This hands-on research course will focus on the current and past distribution of plants and changes in disturbance regimes in the mountains using environmental proxy data preserved in lake sediment cores. A field trip will occur early in the semester. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher. Cross-listed with ENVS 5731. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202 with a C- or higher.
Typically Offered: Fall.

GEOG 4740 - Soil Science and Geography (3 Credits)
Reviews chemical and physical properties of soils, soil development, and geographic distributions of soil types in the context of the role that soils play in natural and human-altered ecosystems. Cross-listed with GEOG 5740, ENVS 4740, ENVS 5740. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GEOG 4750 - Beeography: Geography of Bees (4 Credits)
Beeography is an introduction to the bee world and the amazing diversity in Colorado and beyond. The course will examine the distribution of bees and the pressures they face in different environmental and cultural contexts. It will examine different methods to support and increase bee populations and pollination services, especially in populated environments, including backyard beekeeping of honeybee and native bee populations. Field and lab activities will include beekeeping, native bee collection and identification, bee dissections, pollen processing and identification, and trips to area bee museum collections and apiaries. Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher. Cross-listed with GEOG 5750, ENVS 4750, and ENVS 5750. Term offered: summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or BIOL 2010 (or 2061/2097/2030) and BIOL 2011 (or 2081/2098/2031) or BIOL 2020 (or 2051/2095/2040) and BIOL 2021 (or 2071/2096/2041) with a C- or higher.
Typically Offered: Summer.

GEOG 4757 - Urban Climate and Air Quality (3 Credits)
Explores how people alter climates on micro- to regional scales, and how this in turn affects human health and society. Focusses on recent scientific research, physical processes within cities, and the role of urbanization in global climate change. Cross-listed with GEOG 4757, GEOG 5757, ENVS 4757, and ENVS 5757. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GEOG 4840 - Independent Study: GEOG (1-3 Credits)
Independent research primarily for undergraduate majors. Prereq: Permission of department. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

GEOG 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOG 4950 - Honors Thesis (3 Credits)
A capstone course designed to promote critical thinking, research methodology, and writing/oral presentation skills. Students design and develop a research project under the supervision of a faculty advisor. Each student gives an oral presentation or defense of his or her thesis at the end of the semester in which they enroll. Prereq: Junior standing or higher. Department consent required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Additional Information: Report as Full Time.

GEOG 4990 - Special Topics (1-6 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOG 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with ENVS 4995, ENVS 5995, and GEOG 5995. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

Geology (GEOL)

GEOL 1073 - Physical Geology: Surface Processes (3 Credits)
This survey course develops a basic understanding of surface processes and landforms in geology. It includes one all-day field trip. Students must also take the accompanying laboratory GEOL 1074. No co-credit with GEOL 1072. Prereq or Coreq: GEOL 1074. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Co-req: GEOL 1074
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.

GEOL 1074 - Physical Geology: Surface Processes Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in surface processes and landforms in geology. Students must also take the accompanying lecture GEOL 1073. Prereq or Coreq: GEOL 1073. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1073
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.

GEOL 1083 - Physical Geology: Internal Processes (3 Credits)
This survey course develops a basic understanding of physical geology emphasizing the earth's interior, covering internal processes and properties, with plate tectonics as the underlying theme, Includes one all-day field trip. Students must also take the accompanying laboratory GEOL 1084. No co-credit with GEOL 1082. Prereq or Coreq: GEOL 1084. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1084
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.

GEOL 1084 - Physical Geology: Internal Processes Laboratory (1 Credit)
Introduces the basic scientific approach through investigations, observations, and experiments in internal geologic processes and properties of the earth's interior with plate tectonics as the underlying theme. Prereq or Coreq: GEOL 1083. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq or co-req: GEOL 1083
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.

GEOL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

GEOL 1202 - Introduction to Oceanography (3 Credits)
Surveys modern scientific knowledge of the world's oceans. Intended for non-science students, the course offers a non-quantitative introduction to the major facts and principles of physical, chemical, biological, and geological oceanography. The impact of natural and anthropic events on the marine environment are included. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOL 1840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

GEOL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

GEOL 3032 - Geology of Colorado (3 Credits)
Introductory course focused on the geology of Colorado. The course is divided into two parts: the first half covers general principles of geology, and the second is devoted to the observation of rock types, structures, and geologic relationships in the field. Discussion of plate tectonics, rock formation, construction and interpretation of geologic maps, the geologic time scale, geologic provinces of Colorado, evolution of major landforms, formation and development of mineral resources of Colorado, and current topics in environmental geology. Max hours: 3 Credits.
Grading Basis: Letter Grade

GEOL 3840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOL 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

GEOL 4010 - Landscape Biogeochemistry (3 Credits)
A holistic approach to studying the role chemical elements play in synthesis/decomposition cycles, and the resultant environment from interaction of the lithosphere with the hydrosphere, atmosphere, biosphere, and pedosphere during geological, and ecological timeframes, together with anthropogenic activities. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher, or instructor permission. Cross-listed with GEOG 4010 and ENVS 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Spring.

GEOL 4020 - Earth Environments and Human Impacts (3 Credits)
This course examines the multitude of impacts that humans have exerted on Earth's biomes and physical environment in a systems context, including vegetation, animals, soils, water, landforms and the atmosphere. It considers the ways in which climate changes and modifications in land cover have altered the environment, and how such changes will still accelerate in in coming decades. The course also explores emergent topics such as rewilding, novel and no analogue ecosystems, and ecosystem services. Additionally, it assesses the future impact of a growing human population on the planet within a context of the "anthropocene," an era dominated by human activity. Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher. Cross-listed with ENVS 5020, GEOG 4020. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENVS 1044 and 1045 or ENVS 1042 or GEOG 1202, and GEOG 3232 or ENVS 3232 with a C- or higher.
Typically Offered: Fall.

GEOL 4240 - Applied Geomorphology (3 Credits)
Uses hands-on tasks and field trips to investigate processes behind Earth's changing landforms in a variety of physical landscapes(aeolian, volcanic, coastal, fluvial, karst, glacial and periglacial) as related to rock decay, soils and climatic forcings. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. Cross-listed with GEOG 4240, 5240 and GEOL 5240. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4251 - Fluvial Geomorphology (3 Credits)
Examines interactions between Earth's surface and flowing water across spatial and temporal scales. Considers structure and function of the major components of fluvial systems, with particular attention to the variety of fluvial systems to hydrologic, geologic and anthropogenic controls. Cross-listed with GEOG 4251, GEOG 5251 and GEOL 5251. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher. GEOG 3232 is strongly recommended, though not required. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4270 - Glacial Geomorphology (3 Credits)
Provides an in-depth view of the processes and systems found in glacial environments. Topics include: evidence of past glaciation; present-day glacial extent; glacier dynamics; glacial erosional processes and landforms; glacial depositional processes and landforms. Prereq: GEOL 1073 and 1074 or GEOL 1072 with a C- or better. Cross-listed with GEOG 4270, GEOG 5270 and GEOL 5270. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 with a C- or higher.
Typically Offered: Fall.

GEOL 4840 - Independent Study: GEOL (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

GEOL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

GEOL 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 and GEOL 1083 and GEOL 1084 or GEOL 1082 with a C or higher and instructor permission. Cross-listed with GEOL 5995. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: GEOL 1073 and GEOL 1074 or GEOL 1072 and GEOL 1083 and GEOL 1084 or GEOL 1082 with a C or higher and instructor permission.

German (GRMN)

GRMN 1000 - Germany and the Germans (3 Credits)
Introduces the ways in which the various aspects of German culture help define German life and national identity. By examining art, music and media, primarily of the 20th century, students explore what it means to be German. Note: Taught in English. Term offered: spring, fall. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages.
Typically Offered: Fall, Spring.

GRMN 1010 - Beginning German I (5 Credits)
Introduces basic grammar, sentence structure and speech patterns. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GRMN 1020 - Beginning German II (5 Credits)
(Continuation of GRMN 1010.) Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed GRMN 1010 or equivalent, or have taken one year of high school German, or possess equivalent proficiency. A grade of C- or higher in GRMN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

GRMN 3200 - Current German Society and Culture (3 Credits)
Provides students with a detailed overview of the systems in modern, united Germany such as social, educational, and political. Examines how Germany sees itself as a vital member of the EU. Exposes students to rudimentary use of the German language. Prereq: Sophomore standing. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

GRMN 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: spring, summer, fall. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring, Summer.

GRMN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 4690, SPAN 5690, FREN 4690, FREN 5690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

GRMN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 4691, SPAN 5691, FREN 4691, FREN 5691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

Greek (GREK)

GREK 1010 - Greek I: Biblical (5 Credits)
Intended for students of languages, religious studies, and philosophy. Introduces the forms and syntax of Greek so that in the 13th week students will be able to read about 85% of the New Testament in the original language. Cross-listed with RLST 1010. Max hours: 5 Credits.
Grading Basis: Letter Grade

GREK 1020 - Greek II: Biblical (5 Credits)
A continuation of 1st-semester Biblical and Classical Greek. Covers the remaining forms and syntax of the textbook, with an emphasis on sight-reading passages from the New Testament. At the end of the course we will read, translate and study short fragments and lines written by some Pre-Socratic philosophers such as Thales, Anaxagoras, Anaximander, Heraclitus, and Parmenides. Prereq: GREK 1010. Max hours: 5 Credits.
Grading Basis: Letter Grade
Prereq: GREK 1010.

GREK 2110 - Greek III: Classical (3 Credits)
Introduction to classical Greek, followed by reading of Plato's "Apology" with selections from "Pre-Socratic philosophers" (e.g. Xenophanes of Colophon, Zeno of Elea, Pythagoras) and Aristotle. Prereq: GREK 1020. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: GREK 1020.

GREK 2840 - Independent Study - GREK (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Max hours: 3 Credits.
Grading Basis: Letter Grade

GREK 4840 - Independent Study - GREK (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Health Humanities (HEHM)

HEHM 3100 - Introduction to Health Humanities (3 Credits)
This course introduces students to the rich field of medical humanities. It examines how various disciplines analyze relationships among culture, society and medicine, and what humanistic approaches can teach us about biomedical theory and health care training and practice. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HEHM 3570 - Death & Dying: Social & Medical Perspectives (3 Credits)
Focusing on death, dying and bereavement using medical and social perspectives, this course explores how illness, prolonged dying and sudden death impact care providers, families and communities. Discussion, film, readings and music address the connection of social and medical issues. Cross-listed with SOCY 3570. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

HEHM 3840 - Independent Study (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

HEHM 4840 - Independent Study (1-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HEHM 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

History (HIST)

HIST 1016 - World History to 1500 (3 Credits)
Surveys the rise of civilizations and their interactions from prehistoric to modern times. The emphasis is on the understanding of the various styles or characteristics of civilizations within a global context. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring.

HIST 1026 - World History Since 1500 (3 Credits)
Surveys the interactions of the world's civilizations in modern times. The emphasis is on understanding the concept of modernization within a global context. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring.

HIST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

HIST 1211 - Western Civilization I (3 Credits)
Introduces ancient Mediterranean civilization and the birth of Europe. Covers topics on economics and society, political organization, intellectual history, and art from 3000 B.C. to A.D. 1500. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 1212 - Western Civilization II (3 Credits)
Introduces modern European civilization and its spread over the world. Covers topics on economics and society, political organization, intellectual history, and art from A.D. 1500 to the 20th century. Term offered: fall, spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 1361 - U.S. History to 1876 (3 Credits)
Provides an introduction to the major forces, events and individuals that shaped the historical development of American society, beginning with the European settlement of America and concluding with the Civil War, reconstruction and the early growth of an industrial order. Term offered: fall, spring. Max Hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

HIST 1362 - U.S. History Since 1876 (3 Credits)
Provides an introduction to the major forces, events, and individuals that shaped the historical development of American society from the Civil War to the present. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring, Summer.

HIST 1381 - The History of Now (3 Credits)
Examines several topics of profound interest to historians world wide: nature and technology, secular and religious faiths, and concepts of political union. The experience of the U.S. as it relates to the experiences of other periods and cultures. Term offered: fall, spring. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-HI1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-HI1, History; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring.

HIST 1400 - Controversies in History (3 Credits)
Examines a variety of cases where historians have significant disagreement or diverse interpretations regarding "what happened" and "why," to come to an understanding of what historians do and how they do it. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-HI1, History.
Typically Offered: Fall, Spring, Summer.

HIST 2001 - The Uses and Misuses of History (3 Credits)
This course examines the uses and misuses of historical interpretation in the public sphere, focusing on how history has been employed over time to persuade or influence public debates. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of HIST courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Term offered: spring, summer, fall. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of HIST courses with a 2.75 GPA in HIST courses
Typically Offered: Fall, Spring, Summer.

HIST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, INTS 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 3031 - Theory and Practice of History: An Introduction to the Major (3 Credits)
Introduces history majors to the discipline at the outset of their course work. Covers historiographical trends and methodologies, and familiarizes students with the various types of research and writing they are likely to encounter in their classes. Note: This course should be taken as early as possible, and must be taken before HIST 4839. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 3070 - Studies in Film History (3 Credits)
Examines the history of cinema from a variety of national perspectives. Topics rotate and may include Silent Era Cinema, Classical Hollywood Film, New Hollywood, French New Wave, German Expressionism, etc. Note: May be taken more than once when topics vary. Cross-listed with ENGL 3070. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

HIST 3121 - The World at War, 1914-1945 (3 Credits)
Examines World Wars I and II as episodes in a protracted conflict among the nations of the capitalist West, the emerging states of Asia and the colonial world, and the USSR. Studies the causes and consequences of the wars. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

HIST 3230 - The American Presidency (3 Credits)
Explores the presidency in U.S. History. Topics include: ideological and constitutional foundations; expansion of presidential power in domestic politics and international relations; evolution of presidential campaigns; and dimensions of presidential leadership in politics, society and culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3231 - Famous U.S. Trials (3 Credits)
Interested in Law School? . . . This introduction to the history of the U.S. trial court system contextualizes significant trials in historic and cultural moments. The course explores the roles of legal communication and mass communication in contemporary representations of trials. Cross-listed with COMM 3231. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3232 - The American Colonies to 1750 (3 Credits)
The maturation of the American colonies within the British Empire, the development of commercial and intellectual centers, the creation of uniquely American politics, and the unfolding of critical differences between North and South. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3235 - U.S. Labor History, 1800 to the Present (3 Credits)
Explores the experiences, contributions, and struggles of working-class Americans from the Civil War to the present. Areas of focus include pre-industrial and post-industrial labor, slavery, agricultural labor, gender and working class culture outside of the work place. Particular attention is paid to immigration, ethnicity, race and gender, as they relate to the history of America's laboring class. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3260 - Introduction to Digital Studies (3 Credits)
Develop marketable skills such as building websites, making interactive maps, recording podcasts, and analyzing data while also studying the cultural and ethical dimensions of these technologies. Cross-listed with HIST 5260, COMM 3081, and COMM 5081. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3297 - Social History of Asian Americans (3 Credits)
Introductory-level course surveys the social history of Asian American groups from the mid-19th century to the present. We will examine immigration patterns, the development of communities, social and economic problems, and anti-Asian movements and activities. Cross-listed with ETST 3297. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3343 - Women & Gender in US History (3 Credits)
This course will explore women and gender as drivers of US history. From politics to popular culture, jobs to sexual empowerment, civil rights to economic restructuring, we will use gender as a lens to re-envision familiar stories about American history. Cross-listed with WGST 3343, WGST 5343, and HIST 5343. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3345 - Immigration and Ethnicity in American History (3 Credits)
Explores the personal and collective experience of immigrants to America. Discusses problems of assimilation, urban and rural experiences, and implications for politics, the economy and social attitudes. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

HIST 3347 - African-American History, 1619-Present (3 Credits)
Explores the African-American experience, including definitions of citizenship, strategies for protest and resistance, models of leadership, religious life and cultural expression, divisions of class, color and gender. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3348 - The African-American Protest Tradition, 1865 - Present (3 Credits)
Examines a series of influential African-American activists and considers such themes as intra-racial divisions, Pan-Africanism, black nationalism, the use of the courts and legal efforts, and black conservatism. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3349 - Social Movements in 20th Century America (3 Credits)
By surveying the major American social movements of the twentieth century, this course will explore how Americans have created categories of race, ethnicity, culture, and sexuality and how elite and marginalized citizens have deployed these categories in politics. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

HIST 3350 - Colonial Latin America (3 Credits)
Surveys the creation of colonial empires by Spain and Portugal, 1492-1808. Topics include Native American responses to European incursions, women in colonial society, and slavery in Latin America. Cross-listed with ETST 3350 and HIST 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3360 - Denver History (3 Credits)
Introduces the social, political, economic, and cultural life of this mile high metropolis. Founded in the 1858 gold rush, Denver has grown into a five-county metropolis of over two million. Explore this boom and bust history in lectures, slide shows and walking tours. This course offers students a chance to do their own primary source research project, as well as exams and book reports. Note: Open to all students. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3364 - Native Americans and Spaniards in North America (3 Credits)
Examines the interactions between Native Americans and Spanish invaders beginning in the 16th century. The course explores the impact of colonialism in what is today the American Southwest. Focuses on Native American adaptation and resistance to the European presence. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3365 - Aztlan in the United States: Chicano History from 1821 (3 Credits)
Explores the impact of U.S. rule on the Southwest, paying particular attention to legal, economic, and social changes that created new political and cultural identities in the Southwest. Cross-listed with ETST 3365. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3366 - Nature and Power in American History (3 Credits)
This course explores the relationships between human societies and environmental change in the history of North America. Cross-listed with HIST 5366. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3396 - History of the American Indian (3 Credits)
Indigenous nations in North America comprise hundreds of diverse cultures. This course examines U.S. Indian policy and how indigenous nations responded; how they creatively adapted, and resisted cultural change; and how they continue to persist culturally, socially, and politically. Cross-listed with ETST 3396. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.
Typically Offered: Spring.

HIST 3451 - Introduction to African History (3 Credits)
By looking at specific examples of the cultural, political, and economic experience of African society, this course attempts to introduce and make comprehensive the diverse history of the people of Africa. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3460 - Modern Latin American History (3 Credits)
Surveys the historical development of the modern Latin American countries, beginning with the independence movements of the early 19th century. Emphasizes the 20th century issues and problems that have characterized these countries and affected their relations with the United States. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5460. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3469 - Intro to East Asia: To 1800 (3 Credits)
This course introduces the history of China, Japan and Korea to 1800 focusing on political, economic and social changes. It is designed for lower division undergraduates with no background in Asian history. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3470 - Intro to East Asia: Since 1800 (3 Credits)
This course introduces the history of China, Japan and Korea from 1800 to the present, focusing on political, economic and social changes. It is designed for lower division undergraduates with no background in Asian history. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3480 - Introduction to European History (3 Credits)
This course examines the major events and influences that have shaped modern Europe, including monarchies, the Enlightenment, the Industrial Revolution, the rise of political ideologies, the French and Russian Revolutions, capitalism, imperialism, and two World Wars in the twentieth century. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: spring, summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.
Typically Offered: Fall, Spring, Summer.

HIST 3481 - Ancient Greece (3 Credits)
A history of the Greek-speaking world, from the Bronze Age depicted in Homer's epics to Alexander the Great and the Hellenistic Kingdoms. The course addresses the political, intellectual, socioeconomic, and military history of the eastern Mediterranean, with an emphasis on Greece. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3482 - Rome: City and Empire (3 Credits)
Pagan Rome from its earliest beginnings to the rise of Christianity. Emphasis is on the military, socio-economic, and political history of Rome, its empire in Italy, and its domination of the Mediterranean World (ca. 800 B.C. to A.D. 300). Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3484 - British Isles to 1714 (3 Credits)
A sampler of the rich, diverse, and dramatic history of the peoples of the British Isles. State formation, economic and social change and cultural values are several of the themes threaded through this survey course. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3485 - British Isles Since 1714 (3 Credits)
This course examines the dramatic rise of the British industrial, commercial, and political empire during the 18th and 19th centuries and its equally dramatic decline in the 20th century. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3486 - Renaissance and Reformation (3 Credits)
Explores the late 13th through middle 17th centuries when European art and culture changed dramatically, and when Europe was torn by explosive ideological conflicts and religious upheaval. Cross-listed with RLST 3486. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3487 - Medieval Europe (3 Credits)
Surveys the general history of Europe from the fall of Rome to the opening of modern Europe. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 3488 - Tudor-Stuart England (3 Credits)
England's rise from obscurity in 1487 to the dawn of her age of European and world dominance in the early 18th century. Family life and popular culture as well as Henry VIII, Queen Elizabeth, Parliament, and Cromwell. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3500 - African History in Novels and Films (3 Credits)
Introduces modern Africa through the eyes of creative artists. Various topics, such as childhood, religion, and colonialism, are presented from various points of view--African and non-African. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 3601 - Colorado History (3 Credits)
Presents the story of the people, society, and culture of Colorado from the earliest Native Americans, through the Spanish influx, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern twentieth-century state. Term offered: spring, fall, summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

HIST 3606 - Science, Technology, and Society in the Modern World (3 Credits)
Examines the relationships among science, technology, and society from the early 19th century to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 3616 - Global History of Energy (3 Credits)
Explores the history of human energy use on local, national, and international scales, examining its social, political, and economic effects, and its implications for the environment. Cross-listed with HIST 5616. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 3706 - Age of Revolution (3 Credits)
Examines revolutions in selected societies around the world during the period from 1750 to 1950. The specific revolutions chosen may vary, but representative upheavals in both the Western and non-Western worlds are examined. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 3810 - Topics (3 Credits)
Topics in history with varying subtitles reflecting course content. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

HIST 3840 - Independent Study: History (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HIST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have 15 hours of HIST courses completed with 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: spring, summer, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of HIST courses with a 2.75 GPA in HIST courses
Typically Offered: Fall, Spring, Summer.

HIST 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

HIST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with CHIN 4002, ETST 4002, INTS 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HIST 4027 - Enlightenment and Revolution (3 Credits)
In this course students explore the relationship of ideas and events in Europe during the 17th and 18th centuries. Modernizing trends in the European economy, religion, science, states and international affairs leading up to the French Revolution. Cross-listed with HIST 5027. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4028 - Nations and Classes: 19th Century Europe (3 Credits)
Focuses on material and ideological changes in 19th century Europe, exploring social, cultural, political, economic, and intellectual developments. Cross-listed with HIST 5028. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4029 - Age of Anxiety in Europe (3 Credits)
Looks at Europe at the end of the nineteenth century in an effort to determine if there is any relation between the peculiarities in culture at the time and the horrors in politics that followed. Cross-listed with HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4030 - Europe During the World Wars (3 Credits)
Covers the history of the two world wars and their origins, political and social upheaval during the interwar economic crisis, the rise of communism, Italian fascism and Nazism, with an emphasis on cultural production and intellectual life. Cross-listed with HIST 5030. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4031 - Contemporary Europe (3 Credits)
History of Europe since 1945. Students study the economic, social, and political history of Europe since World War II, with a special emphasis on the Cold War and intellectual currents. Cross-listed with HIST 5031. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4032 - Globalization in World History Since 1945 (3 Credits)
An interdisciplinary course on contemporary world history and globalization. While the course is historically structured, economic, political, and sociological matters are explored. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5032. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

HIST 4034 - Core Themes in European History (3 Credits)
Core themes in modern Europe, 1750 to the present. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4035 - Crisis and Transformation: Europe's 20th Century (3 Credits)
This course examines 20th century European history focusing on themes of crisis and transformation. We will explore how devastating wars, economic depression, stark ideological divisions, and revolutionary social, political and cultural movements dramatically changed Europe over the course of the century. Cross-listed with HIST 5035. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4046 - Victorians and Victorianism (3 Credits)
Taking an interdisciplinary perspective, this course examines English people and English life during the reign of Queen Victoria, 1837-1901. What were the defining features of the Victorian age? What did it mean to be "Victorian?" When and why did the Victorian paradigm break down? Cross-listed with HIST 5046. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4051 - Britain and The Empire (3 Credits)
Examines 19th and 20th century British history, addressing social, cultural, and political themes. Explores industrialization, state growth, and imperialism; relationships between race, gender, and class; and the ways in which colonizers and the colonized experienced empire. Cross-listed with HIST 5051. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4055 - The Atlantic Slave Trade: Africa, Caribbean and U.S. (3 Credits)
Presents a broad overview of the slave trade in the Atlantic World, including discussion of the slave plantation, the creation of Caribbean societies and the consequences of independence from Britain. Cross-listed with HIST 5055. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4062 - Modern France, 1789 to the Present (3 Credits)
Considers the shaping of modern France from the 18th century Bourbon Monarchy and aristocratic society to today's liberal democracy, in which multiculturalism, globalization and supranational institutions call into question the very nature of French identity. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5062. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4071 - Modern Germany (3 Credits)
Surveys the major political, institutional, social, economic, and cultural developments that have occurred in Germany since the late 18th century. Cross-listed with HIST 5071. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4074 - Post-War Germany (3 Credits)
Historical survey of Germany since the second world war, with an emphasis on culture and society. Cross-listed with HIST 5074. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4075 - Travel Stories and Origins of Cultural Anthropology (3 Credits)
Examines the early history of cultural anthropology by means of classic travel literature. Cross-listed with HIST 5075. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4076 - History of Modern Science (3 Credits)
Surveys the history of science from the 18th century to the present. Treats all disciplines, from physics to physiology, in an attempt to understand how the natural world came to dominate our sense of ourselves. Cross-listed with HIST 5076. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4083 - Russia Since 1917 (3 Credits)
Studies the development of the Soviet Union from its formation in the October Revolution, through the Civil War, the new economic policy, industrialization, collectivism, the Stalinist purges, up to the present. Cross-listed with HIST 5083. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4086 - Eastern Europe (3 Credits)
Studies the countries of Eastern Europe from their origins in the Middle Ages to the present. Cross-listed with HIST 5086. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4133 - Management of Material Culture and Museum Collections (3 Credits)
This course provides in-depth knowledge of the rudiments of material culture documentation, preservation and management. While we have designed this class for those interested in working in history museums, this is also appropriate for those students who want to learn the place of artifacts in studying history. Cross-listed with HIST 5133. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4201 - Core Themes in U.S. History (3 Credits)
This course surveys major themes in U.S. history. Cross-listed with HIST 5201. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4209 - Race, Religion, and Belonging (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 4030, ETST 5030, RLST 4030, RLST 5030 and HIST 5209. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4210 - The American Revolution (3 Credits)
The crisis of the British Empire in North America from the end of the French and Indian War to the ratification of the American Constitution. Topics include the emerging economy, constitutional arguments against Britain, the conduct of the war, and the definition of a republic. Cross-listed with HIST 5210. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4212 - Civil War and Reconstruction (3 Credits)
Begins with the causes and outbreak of the American Civil War, describes the military conflict and the social aspects of the war, examines the federal efforts to reconstruct the southern states, and protect the rights of Black citizens after 1865. Cross-listed with HIST 5212. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4213 - The Gilded Age and Early 20th Century Challenges: U.S. History, 1865-1932 (3 Credits)
Topical study of major events in America, including Reconstruction; the rise of industry and the workers' response; westward expansion and the plight of Native Americans; urbanization and immigration; agrarian upheaval; Progressivism; World War I; the challenges of the 1920s and the onset of the Great Depression. Cross-listed with HIST 5213. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4216 - History of American Popular Culture (3 Credits)
Explores American popular culture from the early 1800s to the present. By tracing the development of various entertainment media, including theater, music, movies, and television sitcoms, this course probes how popular culture both reflected and shaped American values and behavior. Cross-listed with HIST 5216. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4217 - Consumer Culture (3 Credits)
This interdisciplinary course examines the dynamics of the consumer culture in the context of social, economic, and technological history. The analysis begins with 17th century European origins, and continues through recent world developments, emphasizing the U.S. since 1800. Note: Open to all students. Cross-listed with HIST 5217. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4219 - Depression, Affluence and Anxiety: U.S. History, 1929 to the Present (3 Credits)
Examines major developments, focusing on the causes of the Depression and efforts to combat it; World War II and postwar readjustments; the Cold War and challenges of world leadership; unparalleled prosperity; Civil Rights movement; the Vietnam War; and economic uncertainties amidst general prosperity. Cross-listed with HIST 5219. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4220 - U.S. Foreign Policy Since 1912 (3 Credits)
The main thrust is the emergence of the U.S. from isolation toward full-scale participation in the affairs of Europe and other areas. Special attention is given to U.S. intervention in two world wars, the Cold War, and the over extension of U.S. commitments since 1960. Cross-listed with HIST 5220. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4222 - U.S. Society and Thought to 1860 (3 Credits)
Major topics include the evolution of Protestantism from Puritans to Transcendentalists; humanitarian reforms such as abolition, temperance, and women's rights; European influences on American thought; the effect of industrialization on the development of class society; and American nostalgia for agrarian life. Cross-listed with HIST 5222. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4223 - U.S. Society and Thought Since 1860 (3 Credits)
Topical survey of the main currents of American thought and their impact upon society. Topics include American philosophy, literature (extensively), art, music, immigration and urbanization, technology, extremism of both left and right, and education. Cross-listed with HIST 5223. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4225 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color – all fought for their own "right to the city". Cross-listed with HIST 5225, WGST 4225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4226 - Capitalism in America (3 Credits)
Explores the social, cultural, and political history of American capitalism from colonial times. Topics include entrepreneurship, labor, territorial and trading expansion, industrialization, the rise of corporations, economic cycles, technological developments, and the role of the state, all within global contexts. Cross-listed with HIST 5226. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4227 - American West (3 Credits)
Introduces the diverse peoples, places, and approaches to the development of the trans-Missouri West from prehistoric times to the present. Cross-listed with HIST 5227. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4228 - Western Art and Architecture (3 Credits)
Introduces art and architecture of the American West, emphasizing their historical context. Students are required to do book reports and a research paper. Course includes walking tours and museum visits. Cross-listed with HIST 5228. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4229 - Colorado Historic Places (3 Credits)
Introduces community architecture, folklore, and history for all students. Students learn how to survey, describe, and designate significant historical structures and districts. Cross-listed with HIST 5229. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4230 - Women in the West (3 Credits)
Focuses on ways in which women, from the mid-19th century through the mid-20th century, of different races, classes, and ethnic background, have interacted and been active participants in the development of the Western states. Cross-listed with HIST 5230 and WGST 4230/5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4231 - History in Museums (3 Credits)
This core course for the museum studies area of public history introduces students to the theory and practice of museum operations. It covers the basics of museum administration, museum collection and preservation, and museum interpretation from both theoretical and practical points of view. Cross-listed with HIST 5231. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4232 - Historic Preservation (3 Credits)
Introduces the history, methodology, and goals of historic preservation. Guest speakers, field trips, research projects, and book reports. Cross-listed with HIST 5232. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4234 - History at Work: Public and Community History (3 Credits)
An overview of history outside the academic setting. Students have the opportunity to learn about jobs through on-site visits and presentations made by people engaged in a wide variety of occupations in history other than teaching. Cross-listed with HIST 5234. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4236 - Colorado Mining and Railroads (3 Credits)
Focuses on the transportation network that shaped the inland West, and its key role in the extractive industry that gave Colorado its start and nourished the highest state through adolescence. Cross-listed with HIST 5236. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4238 - U.S. History Through Fiction (3 Credits)
Explores American history through novels, based on the idea that fiction offers a superb "window" through which to view the past, especially to understand the texture of American society. Cross-listed with HIST 5238. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4240 - National Parks History (3 Credits)
Introduces how the National Park Service uses history to identify, designate, preserve, and interpret America's most outstanding historic and natural history sites. After tours of NPS sites, students select from a wide range of projects. Note: Open to all students. Cross-listed with HIST 5240. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4242 - Oral History (3 Credits)
Trains public history students in the collection of oral history interviews. Students master core readings on the theory, practice, and ethics of oral history. Cross-listed with HIST 5242. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4243 - Public History Administration (3 Credits)
Introduces students to the skills, practice, and ethics of public history administration. Cross-listed with HIST 5243. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4244 - Interpretation of History in Museums: Exhibits and Education (3 Credits)
This course allows students to gain in-depth knowledge of historical interpretation through exhibits and education in a museum setting. This class is designed for those preparing to work in history museums but is also appropriate for teachers and others who want to learn how museum programs interpret history with artifacts and other historical materials. Cross-listed with HIST 5244. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4245 - Heritage Tourism (3 Credits)
History and historic sites have become big business in 21st century tourism. The heritage tourism industry is explored in this introductory course for all interested students focusing on how academic history and historians can partner with tourism and recreation interests. Cross-listed with HIST 5245. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4261 - Working With Data (3 Credits)
Teaches the technical skills of data collection, processing, analysis, and visualization, along with the history and ethics of how societies, corporations, and governments have used and abused data over time. Cross-listed with HIST 5261. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4303 - Sex and Gender in Modern Britain (3 Credits)
Examines modern British history by focusing on sex and gender as central aspects in people's lives. Considers the ways gender shapes the realms of politics, economics, society and culture in Britain from the 18th century to the present. Cross-listed with HIST 5303 and WGST 4303/5303. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 4306, 5306, HIST 5306, WGST 4306, 5306. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4307 - History of Sexuality (3 Credits)
Explores the relationships between gender and norms, sexual practice, and ideas about sexuality in Europe and the United States. Examines how sex and sexuality have changed over time and how those changes relate to social, cultural, political and economic history. Cross-listed with HIST 5307 and WGST 4307/5307. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4308 - Crime, Policing, and Justice in American History (3 Credits)
Focuses on changing legal and cultural definitions of crime, the role of the police, the evolution of punishment in theory and practice, and the role of mass culture in shaping the social history of crime and justice. Cross-listed with HIST 5308. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4345 - Gender, Science, and Medicine: 1600 to the Present (3 Credits)
Examines the ways science and medicine have both shaped and been shaped by ideas about gender. Pays particular attention to the relationship between scientific/medical ideas about the sexes and the social organization of gender. Cross-listed with HIST 5345 and WGST 4345/5345. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4347 - History of Biology (3 Credits)
Examines the development of modern biology from the mid-18th century to the present. Students will look at intellectual, methodological, institutional and social contexts in an attempt to answer the question of how biology became the "pre-eminent" science. Cross-listed with HIST 5347. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4348 - Mind and Malady: A History of Mental Illness (3 Credits)
Examines the history of mental illness from the mid-18th century to the present, focusing on the institutionalization of the mentally ill, the origin of psychiatry, the development of models of mental illness and the evolution of clinical treatment. Cross-listed with HIST 5348. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4411 - Modern Mexico (3 Credits)
Designed to familiarize students with the critical issues in Mexican political, economic and social history. Traces the emergence of independence and the difficult consolidation of an independent nation state. Cross-listed with HIST 5411, ETST 4411. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4412 - Mexico and the United States: People and Politics on the Border (3 Credits)
Examines the convoluted relations between these two republics, focusing on diplomatic, cultural, and social interactions. Cross-listed with HIST 5412. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4414 - Nationalism and State Building in Latin America, 1750-1850 (3 Credits)
Explores the problems of nationalism and post-colonial state building by examining the late colonial and early national periods of Latin American history. The course discusses the impact of the enlightenment, the events of the Wars of Independence, and the quandaries faced by the new nations. Cross-listed with HIST 5414. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4415 - Social Revolutions in Latin America (3 Credits)
A theoretical framework and an empirical basis for understanding the large-scale social movements that have influenced the course of Latin American nations. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5415. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4416 - The Age of Imperialism (3 Credits)
Examines causes, character, and consequences of imperialism in the industrial era (ca. 1840-1975). Through intense study of selected cases, students gain an understanding of the different dynamics and varieties of imperialist control. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

HIST 4417 - Commodities and Globalization (3 Credits)
Trading raw material & processed goods internationally has greatly affected world cultures & geopolitics. Tracing commodity chains since 1500 for food, fuel, industrial material & products, & intellectual property, this course will conclude with the effects of current regulations, marketing & environmental concerns. Cross-listed with HIST 5417. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4418 - Trade and Premodern World History (3 Credits)
Explores the interconnections that shaped premodern world history, considering the ways that the production, exchange, and consumption of cloth were tied to specific forms of political power, social and religious organization, and long distance economic relationships. Cross-listed with HIST 5418. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4420 - Traditional China: China to 1600 (3 Credits)
A general introduction to the history of China from the advent of historic civilization to the point of the great encounter with the West. Cross-listed with HIST 5420. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4421 - Modern China (3 Credits)
Surveys Chinese history in the modern era. Includes examination of Western domination of China; revolution and internal fragmentation of China; Japanese attacks and World War II; and civil war and the communist revolution. Cross-listed with HIST 5421 and CHIN 4421. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4422 - Lvng thr Mao's China: Life, Mat. Cult, Movies, 1949-76 (3 Credits)
Introduces students to ordinary people's daily life in Mao's China (1949-1976) through an exploration of material culture, movies and scholarship. This course pays particular attention to the ways people's everyday living intertwined with politics. Cross-listed with HIST 5422. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4423 - China in the World (3 Credits)
China does not exist apart from the world, and never has. This course approaches Chinese history by asking: how has the world shaped China's history, and how has China shaped the history of the world? Rather than explain what went on in China, we focus on exploring what went on outside-among China's immediate neighbors in East Asia, the entire Eurasian region, the African continent, and the so-called "West." The course moves chronologically from ancient times to the present, and is organized around the themes as conquest, trade, international relations, climate change, environmental stress, and the circulation of ideas. Cross-listed with HIST 5423 and CHIN 4423. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4431 - Modern Japan (3 Credits)
Course of Japanese history since the Perry expedition. Covers Japanese Westernization and industrialization, the expansion of empire and defeat in World War II, the occupation, and the amazing technological and social transformation since the occupation years. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5431. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4451 - Southern Africa (3 Credits)
An in-depth history of the clash of peoples and cultures in Africa south of the Zambezi River. African and Afrikaner political, economic and cultural development in a single land and the consequences of several competing nationalisms existing side by side are examined. Apartheid and African opposition to it are analyzed. Cross-listed with HIST 5451. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4455 - African Struggle for Independence (3 Credits)
An assessment of African leadership from the colonial era to the present. Cross-listed with HIST 5455. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4461 - The Modern Middle East (3 Credits)
Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with HIST 5461. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4462 - Islam in Modern History (3 Credits)
This course studies Islamic thought and practice over the last two centuries in terms of major historical processes that have operated at local, national, and global scales. Cross-listed with HIST 5462, RLST 4462, RLST 5462. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4471 - The Second World War (3 Credits)
The War in its totality: causes, military strategies (equal treatment to European and Pacific theaters), campaigns, impact of technology and weapons, political and social upheaval. Cross-listed with HIST 5471. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4472 - The 1950s: Korean War, the Cold War and Social Transformation (3 Credits)
A critical and methodical exploration of several of the social, cultural, and political events of the 1950s. Investigates the complex interaction between politics and culture during this decade, paying close attention to anti-Communist thought and the Korean War. Cross-listed with HIST 5472. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4475 - The Vietnam War (3 Credits)
Covers the conflict in Vietnam, with roots in the period prior to World War II. Main topics include the rise of nationalism in French Indochina, the war against the French, the Northern move to unify Vietnam, American intervention, and eventual victory of the Northern regime. Cross-listed with HIST 5475. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HIST 4490 - Weapons of Mass Destruction (3 Credits)
Weapons of mass destruction have affected politics, health, and environments around the globe. This course will examine the development, use, and consequences of these modern technologies of war and terror. Cross-listed with HIST 5490. Term offered: summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

HIST 4491 - United States History, 1865-1919 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1865 and 1919. The course will be attentive to the diversity of American experiences and will explore domestic and international themes in United States history. Cross-listed with HIST 5491. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4492 - United States History, 1919-1945 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1919 and 1945. The course will be attentive to the diversity of American experiences and will explore both domestic and international themes in United States history. Cross-listed with HIST 5492. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4493 - United States History, 1945-1973 (3 Credits)
Surveys the major intersections of politics, culture, and society in American history between 1945 and 1973. The course will be attentive to the diversity of American experiences and will explore both domestic and international themes in United States history. Cross-listed with HIST 5493. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4494 - Red and Blue America: U.S. History, 1973-Present (3 Credits)
This course explores American history during a period of immense cultural and political polarization. After 1973, the United States experienced the rise of the New Right, changing attitudes towards sexual "permissiveness," and rapid advancements in technology. Both "law-and-order" politics and the rights campaigns led by immigrants, women, people of color, and LGBTQ+ peoples all reshaped democracy. These developments in the United States, meanwhile, influenced and were shaped by the nation's "hot" and "cold" conflicts in Europe, Latin America, the Middle East, and the rest of the globe. Cross-listed with HIST 5494, WGST 4494, and WGST 5494. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HIST 4503 - Topics in History of Science (3 Credits)
Themes vary from year to year. Possible topics: Darwinism, Nature of Memory, Time and Space, Origins. Cross-listed with HIST 5503. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4504 - Animals in U.S. History (3 Credits)
Human-animal relationships offer powerful and unexpected perspectives on the American past. An eclectic range of readings and viewings, written assignments and contemplative experiences will contextualize contemporary practices, beliefs, and ethics -- vegetarianism, hunting, pet-keeping, and many others -- in historical context. Cross-listed with HIST 5504. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4621 - Explorers and Exploration (3 Credits)
Examines the history of travel and exploration from the 13th century to the present. Readings draw primarily from first-person accounts to understand why people voyage, what they hope to discover, and what happens to them along the way. Cross-listed with HIST 5621. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4622 - Oceans In History (3 Credits)
Explores transoceanic exchanges, relations, and transformations in modern world history. Examines how historians analyze and conceptualize global interactions. Topics include voluntary and forced migrations, resistance and revolution, transoceanic economic relations, piracy, and environmental change. Cross-listed with HIST 5622. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4645 - Archival Management (3 Credits)
This course studies theory and principles pertaining to the management of current and non-current records, public and private archival materials, as well as the administration of archival manuscript depositories for housing records of historical value. Cross-listed with HIST 5645. Max hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4810 - Special Topics (1-3 Credits)
Cross-listed with HIST 5810. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HIST 4839 - History Seminar (3 Credits)
Covers the use of documentary sources and historical criticism, with students utilizing these skills in a historical research paper. Note: Required for history majors. Preferably taken in the senior year. Prereq: HIST 3031 with a grade of C or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: HIST 3031 with a grade of C or higher
Typically Offered: Fall, Spring.

HIST 4840 - Independent Study: HIST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

HIST 4849 - Independent Study History Honors Research Paper (3 Credits)
Students competing for history honors must take this course to prepare their honors paper. The course requires students to produce a finished research paper of professional quality under the direction of a history faculty member. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Open to advanced history majors only. Max Hours: 3 Credits.
Grading Basis: Letter Grade

HIST 4850 - History in the Community: History Day Mentoring (1-3 Credits)
Directed by CU Denver History faculty, students participate in and judge National History Day in Colorado. They gain teaching experience mentoring students preparing social-studies and literacy-based projects. Their papers are based on scholarly readings and analyses of their experiences in middle and high schools. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of department chair. Department consent required. Term offered: spring. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Spring.

HIST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Human Development and Family Relations (HDFR)

HDFR 1000 - Global Human Development & Learning (3 Credits)
The purpose of this course is to examine the contextual nature of human development and learning at the global level. Emphasis is placed on the ecological development of individuals and learning and schooling within familial, cultural and educational contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

HDFR 1010 - Life Span Development in Ecological Settings (3 Credits)
This course is designed to introduce students to human development in ecological settings in particular family, school and community contexts as it occurs across the lifespan, including emotional, physical, and cognitive development, and emphasizes personal adjustment and achievement. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1030 - Who am I? Cultural Identity, Family, Diverse Soc Sys (3 Credits)
This course will use ecological systems theory perspectives as a foundation for understanding diverse Latino family dynamics, the intersection between Latino families, schools and community systems and other critical issues that Latino family systems face in the United States. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1050 - Trailblazing and Leading in Student Affairs: Student Affairs Leadership Dev (3 Credits)
This course provides a basic introduction to student affairs development practices and perspectives. The course provides an exploration of student affairs leadership identity and college student's leadership role in higher education environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 1080 - Lifespan Issues in Family Violence (3 Credits)
This course examines family violence over the lifespan from family system and ecological perspectives. The course explores development, definitions, theory, correlates, and the occurrence of family violence over the lifespan; including practice, interventions, and policy within school and community contexts. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

HDFR 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

HDFR 2000 - Introduction to Family and Community Services (3 Credits)
Through ecological systems theories this course is designed to provide students with an introduction to family and community services within community and educational environments. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 2080 - Sex, Human Development and Family Systems (3 Credits)
Students will become familiar with human sexuality across the life span through behavioral science and ecological perspectives. Different aspects of sexuality including behavioral, biological, developmental and cultural will be examined Implications for working with individuals, families, and couples through a behavioral science context will be explored. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.

HDFR 2083 - Family and Personal Finance (3 Credits)
Students will become familiar with family and personal finances across the life span through the use of behavioral science and ecological perspectives. Different determinants of financial education including behavioral, developmental, and cultural will be examined within familial and individual contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

HDFR 2110 - Child Ecology (3 Credits)
This course focuses on the study of human growth and ecology from conception to adolescence. The emphasis is on the major theories of child growth, development, and ecology and the implications of classic and contemporary research in the community. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 2200 - Love, Family and Human Development (3 Credits)
This course provides an introduction to understanding love, intimate relationships, and family relations through an ecological systems perspective. The course provides an exploration of contemporary diverse family systems and their relationships across the life span. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

HDFR 3002 - Preparing to be a HDFR Professional (3 Credits)
In a seminar format, students will examine the ethics, value systems, and family policies and law affecting the Human Development and Family Relations profession. Students will utilize tools of professional preparation including goal-setting, building/refining resumes, and marketing skills and abilities. Restriction: Faculty or Academic Advisor approval is required to register. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3020 - Black and Latino Children in Families and Schools (3 Credits)
This course will use ecological systems theory perspectives as a foundation for students to develop their understanding about Black and Latino children as members of family systems, school systems and community systems within cultural contexts. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

HDFR 3050 - Children's Thinking and Assessment (3 Credits)
A review of the psychology of children's thinking emphasizing developmental changes in modes of thought. Topics include conceptual behavior, problem solving, intelligence, creativity, humor, play, and an introduction to diagnostic, formative and summative assessment. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3100 - Adolescent Ecology (3 Credits)
Through ecological systems theories this course is designed to provide an understanding of adolescent ecological development and growth. Students will become familiar with adolescent development and growth from ecological perspectives in contexts of families, schools and communities. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3250 - Families in Global Perspectives (3 Credits)
Students will become familiar with family life across the world. Through ecological systems theories, this course is designed to provide an understanding of families in global perspectives. The impact of family policy and practices on international families will be examined. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

HDFR 3400 - Love, Couples and Family (3 Credits)
This course examines the development and maintenance of couple and family relationships through family therapy based concepts, family systems theories and other family theories. Topics include communication patterns, stress and conflict management, decision making and goal-setting within the family. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3500 - Introduction to Higher Education (3 Credits)
The course examines the history and structure of the institutions higher education in U.S. This course will also examine the relationship between institutions of higher education, students, faculty, administrators, and society at large. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 3800 - Leadership for Racial Justice in School and Community Settings (3 Credits)
Students will learn about school- and community based leadership for racial justice in the U.S., considering the various purposes and techniques employed to pursue a more racially justice society. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall.

HDFR 4001 - Families and Parenting (3 Credits)
This course provides an advanced overview of theories and practices that impact culturally and linguistically diverse families and the parenting process through family systems and ecological perspectives. Specifically, there is a focus on the parent-child relationship through adolescence. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4002 - Family Life and Community Programming I (3 Credits)
This course teaches the principles, philosophies, models, and strategic methods of family life education for strengthening interpersonal and family relationships. Culturally competent students will learn about the development and implementation of effective educational programs and experiences within different community settings. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4003 - Leadership and Organizations (3 Credits)
This course provides an understanding of leadership theory and practice in community and educational environments. Students will learn about important aspects about leading diverse community and educational organizations including staff supervision, strategic planning, advancing the organization and maintaining integrity. Cross-listed with HDFR 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4004 - Family and Comm. Prog. II Grant Writing/Fundraising (3 Credits)
This course provides an understanding of developing skills on grant writing and fundraising as related to family, community and educational organizations/agencies. Students will learn about important aspects about grant writing, fundraising fundamentals and funding models for sustainability. Cross-listed with HDFR 5004. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4010 - Family and Cultural Diversity (3 Credits)
The examination of familial, gender, cultural, linguistic, social and other ecological factors on diverse family systems in the United States will be covered. An ecological theoretical analysis of minority family systems within a familial, educational and social justice perspective will be explored. Cross-listed with HDFR 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4040 - Latino Families in School and Communities (3 Credits)
This course will use ecological systems theory perspectives as a foundation for understanding diverse Latino family dynamics, the intersection between Latino families, schools and community systems and other critical issues that Latino family systems face in the United States. Cross-listed with HDFR 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4045 - Abuelos (Grandparents) Latino Families (3 Credits)
The course will focus on the social gerontology of Latinos families in later life. Specifically, the course will examine how ecological factors including familial, cultural, social, economic, health, cognitive and educational, impact the lives of Latino older person's in the contexts of family systems. Cross-listed with HDFR 5045. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4050 - Foundations of Student Affairs (3 Credits)
This course examines theories of college student development including student learning and growth during the postsecondary years. This course will provide an introduction to psychosocial, cognitive, moral, and social identity development theories used to explain college student development. Cross-listed with COUN 5050. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HDFR 4075 - Family Policy & Law (3 Credits)
In this course students will identify, develop, implement and evaluate social policies and laws that effect the well-being of families. Through a family systems perspective, students will examine the law, social services, education, the economy, religion, and politics impact families. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4080 - Global Family Resource Management (3 Credits)
This course examines the allocation of family resources (social, financial and material assets), the influence of various ecological systems, the effect on family functioning and goal-setting from a global perspective. Practical applications for Family Relations professionals are included. Cross-listed with HDFR 5080. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4090 - Helping Profession Skills in HDFR (3 Credits)
This course is designed to provide an overview of essential skills required in a variety of helping situations and settings. Course content includes the development of accurate listening, empathy, reflection, and inquiry skills. Implications for working with individuals, families, and couples will be examined. Cross-listed with HDFR 5090. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4130 - College Student Development (3 Credits)
This course examines theories of college student development including student learning and growth during the postsecondary years. This course will provide an introduction to psychosocial, cognitive, moral, and social identity development theories used to explain college student development. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

HDFR 4200 - Adult Ecology (3 Credits)
The emphasis is on the major theories of adult ecology and growth and the implications of classic and contemporary research in the community. Specifically, biological, psychological, psychosocial, cognitive, and cross-cultural theories will be explored. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4260 - Family Systems and Social Justice (3 Credits)
Relying on ecological systems theories, this course will introduce students to families and family systems. Students will investigate how families experience (in)justice in the areas of access to education, community services, and employment. Cross-listed with HDFR 5260. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4300 - Families in Later Life (3 Credits)
Students will become familiar with the importance of families in later life. Through family systems and ecological systems theories, this course is designed to provide an understanding of the importance of family relationships and implications for practice, research, and policy. Cross-listed with HDFR 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4500 - Diversity, Inclusion, Social Justice in Higher Education (3 Credits)
An examination of society, media, and public and educational policy and their impact on higher education access and persistence for marginalized groups. Students are called to consider how student affairs professionals might promote social justice for marginalized student groups. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4850 - Family Systems Therapy, Religion and Spirituality (3 Credits)
This course examines how the intersection between different religious and spiritual frameworks affects family systems. A strengths-based ecological perspective, family therapy theories and family systems theories will be used to understand religious and spiritual frameworks in working with families in schools and communities. Cross-listed with RLST 4850. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4860 - Trauma Informed Care for Diverse Populations and Co-occurring Disorders (3 Credits)
Trauma Informed Care is a treatment framework that involves understanding, recognizing and responding to effects of all types of trauma. The clinical shift is from “what’s wrong with you” to “what happened to you.” The need to address trauma is increasingly viewed as an important component of effective behavioral health service delivery. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4888 - LGBTQ Family Systems (3 Credits)
This course examines diverse Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) family systems through ecological systems perspectives and family theories. The course provides an exploration of contemporary research, policy and practice as it pertains to LGBTQ families. Max hours: 3 Credits.
Grading Basis: Letter Grade

HDFR 4930 - Human Development and Family Relations Internship (1-5 Credits)
This course provides supervised practicum/field experience to Human Development and Family Relations students. Students will apply theory and evidence-based knowledge in professional situations, enhancing the development of their professional identities and career goals by working within and evaluating community-based organizations. Prereq: HDFR 3002. Repeatable. Max Hours: 5 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 5.
Prereq: HDFR 3002

Humanities (HUMN)

HUMN 1012 - The Humanistic Tradition: Modes of Expression (3 Credits)
Familiarizes students with humanistic modes of expression through the study of history, literature, philosophy, music, and the visual and dramatic arts. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HUMN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

HUMN 4251 - Introduction to Legal Studies (3 Credits)
A survey of the United States legal system, including lawmaking powers, jurisdiction, court procedures, professional ethics and major principles of business law, contracts, estates and probate, family law, property and torts. Cross-listed with HUMN 5251/SSCI 4251/SSCI 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

HUMN 4325 - First Amendment: Theory and Context (3 Credits)
First Amendment jurisprudence including free speech/responsibility, sedition/seditious libel/dissent, prior restraints, time/place/manner restrictions, hate/intimidating speech, defamation, privacy/security tensions, intellectual property/public good, advertising, corporate speech, sexual expression, and public status of religion. Cross-listed with HUMN 5325, SSCI 4325, SSCI 5325, PSCI 4325 and PSCI 5325. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

HUMN 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with SJUS 4770, SSCI 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

HUMN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

HUMN 4984 - Topics: Interdisciplinary Humanities (1-3 Credits)
Concerned with specialized aspects of the humanities from various theoretical and research perspectives. These courses are interdisciplinary and serve as a forum for discussion of individual projects and theses. Term offered: fall, spring. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

Individually Designed Major Course (IDMA)

IDMA 1500 - Introduction to Interdisciplinary Learning (3 Credits)
This course introduces the theories, methodologies, and practices of interdisciplinary studies through a specific theme that will focus on how to learn in an online environment and how interdisciplinary scholars combine the theories and methods of a variety of fields. Students who have earned credit for ISMA 1500 will not earn credit for IDMA 1500. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

IDMA 2840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 2840 will not earn credit for IDMA 2840. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

IDMA 3000 - Special Topics (1-3 Credits)
Special classes for faculty-directed experiences examining issues and problems not generally covered in the curriculum. Students who have earned credit for ISMA 3000 will not earn credit for IDMA 3000. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

IDMA 3100 - Learning Across Disciplines (3 Credits)
Examining a compelling issue, students will learn what kinds of questions require thinking beyond a single discipline, how interdisciplinary scholars combine a variety of fields, and how to approach the challenges of interdisciplinary writing. Students who have earned credit for ISMA 3100 will not earn credit for IDMA 3100.Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IDMA 3500 - Interdisciplinary Experiential Learning (3 Credits)
In this course, students will the knowledge from their chosen clusters to bear on an experiential opportunity. Choosing an internship, community-based project, or job extension, students will collaborate with peers to design projects in this highly student-driven course. Prereq: IDMA 1500 with a C- or higher. Students who have earned credit for ISMA 3500 will not earn credit for IDMA 3500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: IDMA 1500 with a C- or higher

IDMA 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 3840 will not earn credit for IDMA 3840. Term offered: fall, spring, summer. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

IDMA 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Students who have earned credit for ISMA 3939 will not earn credit for IDMA 3939. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

IDMA 4500 - Interdisciplinary Learning Capstone (3 Credits)
This course brings together students who have been working on individualized majors to share a capstone experience. The goal is for students to integrate knowledge from their cluster and apply it to a project relevant to their field of interest. Prereq: IDMA 3500 with a C- or higher. Students who have earned credit for ISMA 4500 will not earn credit for IDMA 4500. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: IDMA 3500 with a C- or higher.

IDMA 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 4840 will not earn credit for IDMA 4840. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

IDMA 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Students who have earned credit for ISMA 4880 will not earn credit for IDMA 4880. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

IDMA 4900 - Interdisciplinary Studies Capstone (3 Credits)
Students will be guided through the research process as they complete interdisciplinary capstone projects. They will receive feedback during each stage of the project's development and consultation from discipline specific faculty advisors. Prereq: COMM 2500 or HEHM 3100 or IDMA 3100 or PBHL 2001 or SOCY 3440 with a C- or higher. Students who have earned credit for ISMA 4900 will not earn credit for IDMA 4900. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: COMM 2500 or HEHM 3100 or IDMA 3100 or PBHL 2001 or SOCY 3440 with a C- or higher.

Information Systems (ISMG)

ISMG 2050 - Business Problem Solving Tools (3 Credits)
This course focuses on the technology and problem-solving skills necessary for students to succeed both at school and in the business world. This course teaches how to make business decision using spreadsheets, databases and web tools. Students solve problems in statistics, accounting, finance, marketing, management and information systems. The objective is to provide students with problem solving methods and tools necessary to succeed in the business community. Restrictions: As a business core course, a grade of a 'C-' or better must be earned to satisfy Business graduation and prerequisites for other business courses. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 2075 - Introduction to Business Data (1 Credit)
Introduction to Business Data prepares students to use data sources to analyze and solve real-life business problems. It challenges students to use critical thinking and analysis to find efficient and effective solutions to real-life business situations. Students will use data to solve problems in accounting, finance, and information systems. It is intended for business students that have not satisfied the business data requirements of ISMG 2050. Prereq: Computer Competency and prior coursework covering spreadsheet software. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 2800 - Designing for the Web (3 Credits)
Students examine how the Web is evolving to support a variety of business needs. The course covers the design and usability principals necessary for improving online interactions via traditional websites as well as using technologies promoting collaboration and information sharing (e.g. social networks, blogs, wikis, forms). Topics include: the principles of web page and web site design; hypertext markup language, cascading style sheets, streaming video, online collaboration technologies; client and server scripting; and the process of testing and publishing web sites. Coreq: ISMG 2050. As a corequisite, ISMG 2050 can be taken concurrently or completed prior. If completed prior, must earn a C- or higher. Restriction: Restricted to undergraduate Business majors at a sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ISMG 2050. If completed prior, must earn a C- or higher. Restriction: Restricted to undergraduate Business majors at a sophomore standing or higher.
Typically Offered: Spring.

ISMG 3000 - Technology In Business (3 Credits)
Provides an introduction on how various technologies are utilized by organizations to drive business decisions and gain a competitive advantage. Students will learn how organizations can leverage information technology to streamline operations and become more efficient & effective. Students will be exposed to the concepts of: artificial intelligence, business intelligence, cybersecurity, data and information, e-business, ethical use of data, enterprise information systems, organizational responsibilities related to information technology, project management, systems development life cycle, and wireless communications. Note: Business core course therefore a grade of a "C" or better must be earned to satisfy graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Typically Offered: Fall, Spring.

ISMG 3050 - Intermediate Excel for Business (1 Credit)
Spreadsheet software remains one of the essential digital skills required by businesses. In this course, you will learn key Excel skills including creating charts/graphs, filtering information, using pivot tables to summarize data, mastering Excel functions including sumif, countif, and vlookup. Cross-listed with ISMG 5050. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3070 - Introduction to Tableau (1 Credit)
Tableau is a widely used business intelligence (BI) and analytics software that makes it easier for people to explore and understand data. This class introduces data management concepts and terminology, provides basic proficiency in analyzing and exploring data in Tableau. Students will transform raw data to meaningful visualizations and insights, create interactive dashboards and stories, and handle multiple data sources in Tableau. Cross-listed with ISMG 5070. Max hours: 1 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3080 - SQL Foundations (1 Credit)
Structured Query Language (SQL or "Sequel") is a special-purpose language designed for managing data in a relational database and is necessary for careers dealing with data across many business roles. This class introduces students to data management concepts and terminology. This class will prepare you to extract data from relational databases using SQL syntax shared by many types of databases, such as PostgreSQL, MySQL, SQL Server, and Oracle. Cross-listed with ISMG 5080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3090 - Introduction to Python for Business (1 Credit)
Python is a high-level programming language used by companies like Google, Facebook, and JP Morgan to solve common business and decision problems. This course introduces the Python programming language and the Pandas data analysis package to enable students to write simple data manipulation and analysis programs. The course uses business applied cases and dataset to enable students to increase decision making efficiency and productivity. It introduces algorithmic thinking skills that are beneficial for every manager in today's data-rich economy and can also serve as a starting point for learning more advanced programming skills. Cross-listed with ISMG 5090. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3110 - Data Government and Ethics (3 Credits)
Most businesses and organizations recognize that data is valuable, yet many don't know what to do with their vast amounts of data. In this course, students will learn to recognize the roles and responsibilities of data stakeholders, understand data's ethical, legal, fiscal, and strategic implications, plan and create ethical data governance programs, and understand how to manage, monitor, and measure the effectiveness of such programs. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 3300 - Social Media in Business (3 Credits)
This course focuses on the fundamentals and practical skills of social media marketing. Topics include social interactions, social media metrics, social media ads, content marketing, viral and influencer marketing, the use of social media in marketing research, managing consumers via social media, as well as other trends in social media marketing. Students engage in hands on applications including the creation and management of real brands' social media marketing activities. Cross-listed with MKTG 3300. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ISMG 3500 - Business Data and Database Management (3 Credits)
The success of today's business often hinges on the ability to turn mountains of data into critical information to make right decisions quickly and efficiently. Databases are ubiquitous in today's business environment and are the backbone of today's organizations. This course introduces students to data storage, data retrieval, and data management using current business data management tools. This course emphasizes database design and Structured Query Language (SQL) with hands-on exercises. Prereq: ISMG 2050 with a grade of C- or higher or department approved equivalent transfer credit (may need 1-credit ISMG 3050 and/or ISMG 3070 as supplement). Max hours: 3 Credits.
Grading Basis: Letter Grade
D-BU ISMG 2050 C-+BUSNU+Junior
Typically Offered: Fall.

ISMG 3600 - System Strategy, Architecture and Design (3 Credits)
This course is designed to provide the understanding of current concepts related to information systems development in an organizational context. It emphasizes the interactive nature of the analysis and design process. Topics include: requirements analysis, model based analysis and design; evaluating outsourcing, COTS and other systems acquisition options; and quality, six-sigma, and ethics in design. New concepts such as agile modeling and extreme programming are covered. ISMG 3500, database, is a recommended but not required co-requisite. Prereq: ISMG 2050 with a grade of C- or higher or department approved equivalent transfer credit (may need 1-credit ISMG 3050 and/or 3070 as supplement). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a C- or higher.
Typically Offered: Spring.

ISMG 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4028 - Travel Study Topics (3 Credits)
Join your classmates in an international travel study course to understand the business operations of another culture. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4200 - Building Business Applications (3 Credits)
Examines how software platforms for mobile business applications are designed and implemented. Usability, logic, and platform selection issues are highlighted through the development of simple mobile business systems. Includes programming concepts, interface design; storing, retrieving, and manipulating information; real time decision making; platform selection, testing and deployment. Prereq: ISMG 2800 with a D- or higher. Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2800 Coreq: ISMG 3500 Restriction: Restricted to undergraduate Business majors at a junior standing or higher
Typically Offered: Fall.

ISMG 4300 - Information Systems Security and Privacy (3 Credits)
This course is designed to develop knowledge and skills for security of information and information systems within organizations. This course focuses on concepts and methods associated with planning, designing, implementing, managing, and auditing security at all levels and on all systems platforms, including enterprise systems. This course presents techniques for assessing risk associated with accidental and intentional breaches of security as well as disaster recovery planning. The ethical treatment of data is discussed. Prereq or Coreq: ISMG 3000. As a prerequisite, a grade of C or higher is required. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with ISMG 6430. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: ISMG 3000. As a prerequisite, a grade of C or higher is required. Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ISMG 4400 - Programming Fundamentals with Python (3 Credits)
This course is designed to provide a thorough introduction to Python and fundamental programming concepts like data structures, networked application program interfaces, files and databases. Principles of object-oriented programming and secure programming practices are demonstrated using programming constructs taken from the business domain. Students are required to design and create their own applications for data retrieval, processing, and visualization. Prereq: ISMG 2800 with a D- or higher. Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: ISMG 3500. As a corequisite, ISMG 3500 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

ISMG 4450 - Web Development Immersive (12 Credits)
This course is designed to simulate what you'll experience in a real work environment, and covers the languages, frameworks, and computer science fundamentals essential to a career in web development. It will cover introduction to programming and Front End Development, Server Side Programming with Node, Front End frameworks and Single Page Applications, and Data Structures and Algorithms, as well as a capstone project. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 12 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4700 - IT Infrastructure (3 Credits)
This course provides in-depth knowledge of data communications and networking requirements utilized in an organization. Networking models, devices, optimization, and security of those devices, including troubleshooting, is covered. Management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options is covered. Students learn to evaluate, select, and implement different communication devices within an organization. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Spring.

ISMG 4750 - Business Intelligence and Financial Modeling (3 Credits)
This course will introduce students to the application of business intelligence in a corporate finance setting. Financial data intelligence is essential for effective decision making throughout the firm, in finance directly and in other functions supported by the finance department. Strategy setting, budgeting, and new product development are just a few decision areas where finance personnel play an active role. In this course, we learn how to apply business intelligence software tools to enable finance personnel to access and analyze corporate data in support of critical decision making across the enterprise. Students will also analyze data through the use of financial models built in Microsoft Excel. The development of complex financial models will provide students with valuable hands-on experience with a software tool used widely incorporate finance departments. Prereq: ISMG 2050 with a grade of 'C-' or higher, FNCE 3000 and ISMG 3000 (ACCT 4054 may substitute for ISMG 3000) all with a grade of 'C' or higher. Cross-listed with FNCE 4750 and ISMG 6820. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ISMG 2050 with a grade of 'C-' or higher, FNCE 3000 and ISMG 3000 (ACCT 4054 may substitute for ISMG 3000) all with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

ISMG 4760 - Customer Relationship Management (3 Credits)
This marketing-theory driven course examines customer relationship management (CRM) as a key strategic process for organizations. Composed of people, technology and processes, effective CRM optimizes the selection or identification, acquisition, growth and retention of desired customers to maximize profit. Besides presenting an overview of the CRM process, its strategic role in the organization and its place in marketing, students have an opportunity to create simulated CRM database using popular software package that help to illustrate what CRM can do, its advantages and limitations. Prereq: MKTG 3000 and ISMG 3000 both with a grade of C or higher. Cross-listed with MKTG 4760. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 and ISMG 3000 both with a grade of C or higher
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4780 - Accounting and Information Systems Processes and Controls (3 Credits)
The course is designed to develop knowledge and skills used to understand and evaluate corporate accounting processes and systems. It focuses on financial and information system internal controls and the flow of corporate information through accounting system. A financial system objective and risk assessment approach is used to present concepts and techniques for evaluating the adequacy of system processes and controls. Cross-listed with ACCT 4780, 6510 and ISMG 6510. Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Completion of ACCT 2200, ACCT 2220 and ACCT4054 with a grade of 'C' or better. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

ISMG 4785 - Ethics: A Formula for Success (3 Credits)
Students will learn how to spot and address red flags that foster unethical behavior in both publicly-traded and privately-held businesses. Governance and stakeholder management techniques that incentivize ethical behavior will be highlighted using examples of companies that are financially successful by “doing the right thing.” Principle-based ethics are emphasized, namely, integrity, trust, accountability, transparency, fairness, respect, viability, and compliance with the rule of law. Cross-listed with MGMT 3420, MGMT 6420, ISMG 6885. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

ISMG 4860 - Ethical Hacking Concepts and Methodologies (3 Credits)
From a technical perspective, organizations need to know how hackers work so that they can build their security around it and take preemptive measures against future attacks. The goal of ethical hacking is to understand current exploits and assess weaknesses and vulnerabilities of various organizational information systems by attacking them within legal limits. This course is designed to provide students an insight into current hacking tools and techniques used by hackers and security professionals to break into any computer systems. Throughout the course, students will engage in offensive and defensive hands-on exercises stressing ethical hacking and penetration testing that will be conducted in a vendor-neutral virtual environment. Topics include security threats and attack vectors, footprinting and reconnaissance, Google hacking, social engineering, insider threat, network scanning and enumeration techniques, vulnerability assessment, the Dark Web, and attack and defense strategies in emerging technologies, such as the Internet of Things (IoT) and cloud computing. Recommendation: ISMG 4700 or equivalent is advised, but not required, to take course. As a recommendation, ISMG 4700 can be taken concurrently or completed prior. Cross-listed with ISMG 6860. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 4865 - Digital Forensics Analysis (3 Credits)
From cyberterrorism to identity theft, the digital age has brought about a change in how crime is being committed. The usage of computers and the Internet in crime has led to the emerging field of digital forensics. Most businesses employ digital forensic experts to identify cyber threats, protect against insider threats, reinforce data loss prevention, reduce the risk of identity theft, fraud, and other digital crimes, and aid in the collection of digital evidence for various investigations. This course is designed to provide students the necessary skills to perform an effective digital forensics investigation. It presents a methodological approach to digital forensics, including searching and seizing, chain-of-custody, acquisition, preservation, analysis, and reporting of digital evidence. It covers major forensic investigation scenarios that enable students to acquire necessary hands-on experience on various forensic investigation techniques and standard forensic tools required to successfully carry out a digital forensic investigation leading to the prosecution of perpetrators. Cross-listed with ISMG 6865. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

ISMG 4900 - Project Management and Practice (3 Credits)
Covers the factors necessary for successful management of enhancement projects. Both technical and behavioral aspects of project management are discussed. The focus is on management of development for enterprise-level systems. Topics include: managing the system lifecycle; requirements determination, logical design, physical design, testing, implementation; metrics for project management; managing expectations: superiors, users, team members and others related to the project; determining skill requirement and staffing the project; cost-effectiveness analysis; reporting and presentation techniques; effective management of both behavioral and technical aspects of the project; change management. Oral and/or written communication skills are applied in this course. Oral and/or written communication skills are applied in this course. Note: Successful completion of this course meets the educational requirements to sit for both the PMP and CAPM exams. Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School.

ISMG 4950 - Special Topics (3 Credits)
Seldom offered. This course varies from offering to offering. Typically, it is a research-oriented course exploring new developments in information systems. Prerequisites vary according to topic. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Initial Teacher Education (ITED)

ITED 4700 - Instructional Teamwork Academy (1 Credit)
The academy consists of four modules of varying length for a total of 15 clock hours of instructional time. The course consists of introductory material regarding teamwork, delineation of roles and responsibilities, classroom instruction, and behavior management. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4710 - Student Supervision Academy (1 Credit)
The focus of the 15 clock hour academy is the effective management of large groups of students on playgrounds, in lunchrooms, halls, locker rooms, parking lots where buses are loading, on buses and in other instructional settings. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4720 - Interpersonal Skills Academy (1 Credit)
The focus of this 15 hour academy is on developing effective interpersonal skills that are necessary for working as part of a team. Throughout this academy importance of issues of diversity based on culture, experience and gender in communication and conflict resolution processes is highlighted. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4730 - Personal Growth and Development Academy (1 Credit)
This 15 contact hour academy covers self-appraisals, participation in the evaluation process and plan for continued professional growth and development, stress-management strategies and using creativity in dealing with problematic situations. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4740 - Behavior Management (1 Credit)
This academy gives the paraeducator knowledge and skill in instructional methods that support students who have challenging behaviors in inclusive classrooms, resource rooms, self-contained classrooms, domestic settings, and in the community. These modules focus on the interactions that paraeducators have with students whose behaviors are challenging and on the role they play in assisting the professional members of their team with behavior challenges. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4750 - Instructional Strategies Academy (1 Credit)
This academy gives the paraeducator knowledge and skills in analyzing the teaching environment and individual student needs for the particular level of support, degree of adaptation or accommodation or modification and instructional method that would best facilitate learning. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4760 - Instructional Technology Academy (1 Credit)
This 15 contact hour academy is intended to provide paraeducators with skills in operating typical school-wide technologies. The focus is on examining the types of technology used daily, as well as those types that they may not currently have skills in using but which can broaden their repertoire of available skills. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4770 - Vocabulary and Comprehension (1 Credit)
Paraeducators are provided with the skills needed to assist classroom teachers in meeting literacy needs of students in the areas of vocabulary and comprehension. Skills applicable to assisting diverse populations such as special education, Title 1, ELA, and General Education. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4780 - Assisting with Phonemic Awareness and Phonics in the Classroom (1 Credit)
This academy provides the paraeducator with skills and techniques needed to assist literacy needs of diverse populations of students with phonemic awareness and phonics as it relates to the early, emergent and fluent reader. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4790 - Assisting with Reading Fluency in the Classroom (1 Credit)
This academy provides the paraeducator with skills needed to assist literacy needs of diverse populations of students in the area of reading fluency. It covers important fluency concepts and terms and the use of a variety of research-based instructional techniques that improve fluency at the word, phrase, sentence and connected text levels. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4800 - Grades K-4 Mathematics (1 Credit)
This academy is designed to provide paraeducators with the skills and knowledge needed to assist students, grades K through four, with mathematics skills taught in the classroom. The course content is designed and adapted from standards recommended by the National Council of Teachers of Mathematics. It includes the specific skill building area of number sense, computational techniques, algebraic thinking, geometry, measurement, data and probability as they apply to grades K-4 learners. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4810 - Number Theory and Rational Numbers (1 Credit)
This academy provides paraeducators with the skills and knowledge needed to assist students with specific mathematics skills typically taught in grades five though eight. This academy solidifies the concepts learned in assisting with K-4 math and provides a base for assisting with high school mathematics. It includes the specific skill building areas of number sense; computational techniques for fractions, decimals and percents and their related applications as they apply to intermediate and middle school learners. The course content is designed and adapted from the standards recommended by the National Council of Teachers of Mathematics. Max hours: 1 Credit.
Grading Basis: Letter Grade

ITED 4820 - Algebraic Concepts and Spatial Reasoning (1 Credit)
This academy provides paraeducators with the skills and knowledge needed to assist students, grades 5-8, with the mathematics skills taught in the classroom. The course content is designed and adapted from standards recommended by the National Council of Teachers of Mathematics. It includes the specific skill building areas of real number building properties; graphical representations; algebraic concepts and problem solving; data and probability; and spatial reasoning skills as they apply to intermediate and middle school learners. Max hours: 1 Credit.
Grading Basis: Letter Grade

Instructional Technology (INTE)

INTE 2000 - Digital Teaching and Learning (3 Credits)
Survey of technology for: (1) your own learning, informally and in classes; (2) your students' learning when you become a teacher; and (3) sharing with peers and colleagues. Use tools to address problems of equity, access, and learning needs. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 2500 - #Learning: Digital Spaces and Far Out Places (3 Credits)
Digital media have transformed where, how, and why people learn. In this course we examine contemporary developments in digital media and learning. and explore topics such as social networking and media, virtual and augmented reality, civic media, gamified learning, and mobile learning. This is a hands-on and minds-on course where we immerse ourselves in digital spaces to build projects that support our civic, communication and collaboration, and creative interests. Come and learn to use digital media to enhance your life, community, and beyond! Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

INTE 4000 - Maker Studio (3 Credits)
The maker studio is a collaborative practicum within the context of makerculture, projectbased learning, and learning experience design. The course focuses on the practical translation of learning design theory to learning design reality, presenting learners with challenges to be resolved with creative solutions. Cross-listed with INTE 5000. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4100 - Learning Experience Design (3 Credits)
Instructional design is the process used to analyze, design, develop, and evaluate learning solutions. You will identify a gap in learning or performance and design a learning solution in the form of courses units, modules, and other instructional resources. Cross-listed with INTE 5100. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 4300 - Critical Digital Literacies (3 Credits)
Critical Digital Literacies surveys intersections among literacy studies, digital media, and critical education. The course blends theory with practice, and design with leadership, to immerse students among the communities, developments, and debates pertinent to critical digital literacies. Cross-listed with INTE 5300. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students
Typically Offered: Fall.

INTE 4320 - Games and Learning (3 Credits)
This course examines the use of games for learning and education across formal and informal environments. Students will survey contemporary learning theory, media, trends, and challenges related to designing and playing games in informal, community-based, online, and school settings. Cross-listed with INTE 5320. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4340 - Learning with Digital Stories (3 Credits)
This course reviews the uses of digital storytelling for learning. Develop and publish a short digital story that tells something important about you and your interests. Explore ways that creating or using digital stories can aid learning and personal growth. Cross-listed with INTE 5340.
Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4660 - Developing Self-Paced Online Modules (3 Credits)
Students use a variety of tools and strategies to develop self-paced eLearning courseware, such as tutorials. The course covers critical aspects of the instructional development process that support the creation of effective self-paced online learning experiences, materials and resources. Cross-listed with INTE 5660. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTE 4665 - Learning with Social Media and Networking (3 Credits)
The focus of this course is on how educators leverage networked social tools, technologies, and environments to address educational needs, opportunities, and problems of practice; and establish and nurture their own professional learning through participation in digital cultures. Cross-listed with INTE 5665. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

INTE 4680 - Producing Media for Learning (3 Credits)
Students develop and integrate media resources into eLearning environments, applying principles of media selection and multimedia learning. Students explore a variety of tools for producing audio, video, and multimedia content and examine ways to enhance eLearning courses through multimedia presentation and engagement resources. Cross-listed with INTE 5680. Max hours: 3 Credit Hours.
Grading Basis: Letter Grade

INTE 4711 - Creative Designs for Instructional Materials (3 Credits)
This course is a project-based exploration of design theories, principles, and best practices for communicating information to diverse learning audiences. Students apply unique design approaches and formats to the creation of materials for teaching, learning, and being of service to underrepresented communities. Cross-listed with INTE 5711. Restriction: Restricted to undergraduate students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students

Interdisciplinary Arts (ARTS)

ARTS 1000 - Arts In Our Time (3 Credits)
Multidisciplinary course designed to introduce students to the ways in which arts work and how the arts shape our perception of the world around us. Each student selects three four-week modules designed to examine each of the disciplines of fine arts, music and theatre, in the context of the creative process, audience perception and historical perspective. Every five weeks, students from each of the modules join forces in a week of "Inter-arts" sessions -- lectures and discussions about the relationship of the arts to each other and to our contemporary culture. Topics which are addressed in the modules include such things as American musical theatre, perception of jazz, public sculpture, light as art, sonic explorations, photography, history of production design, women in American music and censorship. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARTS 1111 - First-Year Seminar (3 Credits)
The course explores the nature of creative inspiration, its potential and implementation. Through individual and collaborative projects, students investigate the interdisciplinary composition and development of the literary, visual and performing arts and their aesthetic, social and political impact. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

ARTS 1150 - Topics in Cross-Disciplinary Arts I (1-3 Credits)
Designed to explore the ways in which the arts are a part of daily life. Research and observation of the variety of ways in which the arts are utilized. Prepares students to participate in special projects. Specific topics and projects change each semester. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

ARTS 1400 - The Horror Film (3 Credits)
This course is an analysis of the horror film genre and its significance as a reflection on society. It will look at both the history and development of this genre and the impact these films have had. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARTS 1500 - The Art and Entertainment Industry (3 Credits)
This multidisciplinary course presents a structural overview of multiple arts and entertainment industries. It examines macro themes of intellectual property, audience development and artist development. The course focuses on specific sectors such as the film, music, art, broadcasting, video gaming and the internet, and the art/museum sector. Max Hours: 3 Credits.
Grading Basis: Letter Grade

ARTS 1700 - CMTC Topics in Transdisciplinary Practice (1-6 Credits)
Specialized topics are investigated via future- and professionally–focused curricula that utilize transdisciplinary collaboration, creativity and innovative approaches to real-world problems. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARTS 2150 - Topics in Cross-Disciplinary Arts II (1-3 Credits)
Provides opportunities for students to apply artists' methods and media in a non-presentation setting. Experiential research is centered around a specific topic each semester, but enable students to discover a broader understanding of the arts. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARTS 2700 - CMTC Topics in Transdisciplinary Practice (1-6 Credits)
Specialized topics are investigated via future- and professionally–focused curricula that utilize transdisciplinary collaboration, creativity and innovative approaches to real-world problems. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARTS 3150 - Topics in Cross-Disciplinary Arts III (3 Credits)
Focuses on the ways in which the arts are engaged in communities as expressions of identity as well as agents of change. Historical research and applied projects provide a foundation for participation in designated team projects. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Summer.

ARTS 3400 - World Cinema (3 Credits)
This course will examine representative examples of films from around the world to understand the current interests and concerns of world cinema, as well as to learn what concerns various countries around the world, and how those concerns are expressed. Max hours: 3 Credits.
Grading Basis: Letter Grade

ARTS 3700 - CMTC Topics in Transdisciplinary Practice (1-6 Credits)
Specialized topics are investigated via future- and professionally–focused curricula that utilize transdisciplinary collaboration, creativity and innovative approaches to real-world problems. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARTS 4150 - Topics in Cross-Disciplinary Arts IV (3 Credits)
Investigates the historical and critical perspectives of the arts in a variety of contexts. Specific topics provide a focus for students to discover the ways in which the arts inform each other and are shaped by the events of the world. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Summer.

ARTS 4700 - CMTC Topics in Transdisciplinary Practice (1-6 Credits)
Specialized topics are investigated via future- and professionally–focused curricula that utilize transdisciplinary collaboration, creativity and innovative approaches to real-world problems. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

ARTS 4939 - Internship (1-3 Credits)
Students build professional skills and increase their understanding of creative industries through experiential learning and course work designed to expand internship experiences into powerful learning. Assigned readings, group discussions, weekly summaries, and final paper/presentation support and reflect internship activities and build interpersonal, organizational, and industry specific skills while increasing knowledge of business practices and professionalism. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

Interdisciplinary Studies (IDST)

IDST 4000 - Special Topics (1-3 Credits)
Cross-listed with IDST 5000. Note: May be taken more than once for credit when topics vary. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

IDST 4010 - Foundations of STEM Communication (3 Credits)
This course will provide students with an introduction to STEM communication and offer opportunities for developing STEM content for a variety of audiences across multiple formats. These formats span written, oral, digital, and social media communication. Through classroom exercises and assignments, students will understand the role of communication in shaping perceptions, knowledge, decisions and ultimately realities vis-a-vis STEM. They will also learn to provide critical analysis of popular mainstream STEM communication and be able to identify basic expectations and constraints of STEM communication across audience and context. The class will explore approaches to communicating concepts in STEM disciplines to a variety of audiences through practice. Ultimately, the students will develop the skills and resources necessary to enable effective communication of complex STEM ideas to a wide range of audiences. Note: Students may not earn credit if they have already received credit for IDST topics courses with a similar title. Suggested background: Students are recommended to have completed at least one undergraduate sequence in a STEM discipline before enrolling in this course. Cross-listed with IDST 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

Interior Design (INTD)

INTD 2000 - Global History & Theory of Interior Design (3 Credits)
Students will gain knowledge about the history of interiors in relation to architecture, art history, decorative arts, furniture, and material culture from western and non-western perspectives. Students will gain knowledge of technologies affecting interior design and gain an awareness of human and environmental behavior theories that inform design. Restriction: Restricted to undergrads with sophomore standing or higher. Cross-listed with INTD 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students with sophomore standing or higher.

INTD 3100 - Drawing Out the Interiors (3 Credits)
In this course, students gain an understanding of elements and principles of design, including spatial definition, organization, and human-centered design through precedence studies and on-site spatial analysis. Students develop 2d and 3d visualization skills, and gain knowledge of analog and digital tools to effectively communicate design ideas from conceptualization and design development integrating furnishings, products, materials, and finishes. Restriction: Restricted to undergrads with sophomore standing or higher. Cross-listed with INTD 5100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students with sophomore standing or higher.
Typically Offered: Fall.

INTD 3686 - Special Topics in Interior Design (3 Credits)
Various topical concerns are offered in interior design history, theory, elements, concepts, methods and implementation strategies, and other related areas. Repeatable. Max hours: 24 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 24.
Typically Offered: Fall, Spring, Summer.

INTD 4000 - Light, Color, Materials and Detailing (3 Credits)
Students will understand and apply principles and theories of light and color in relation to environmental impact and well-being. Students will understand interior construction in relation to base building systems and apply sustainable building practices to project-based assignments. Restriction: Restricted to undergrads with junior standing or higher. Cross-listed with INTD 6000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

INTD 4100 - Design Thinking and Collaboration (3 Credits)
Design thinking strategies and learning to work collaboratively across disciplines form the basis of this course. Students develop practical skills utilizing design thinking methods to problem solve on team-based projects pertaining to the built-environment. Restriction: Restricted to undergrads with junior standing or higher. Cross-listed with INTD 6100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior standing or higher.
Typically Offered: Fall.

INTD 4200 - Interior Design Workshop (3 Credits)
This workshop introduces a design studio-style course with a hands-on approach. Exploring two and three-dimensional design. Emphasis on fundamental skills and ideas shared across design disciplines, JEDI, and sustainability. Creative processes, visual order, materials, and critical thinking are investigated through applied projects. Students will apply design processes and theories to basic interior design projects, as they learn additional graphic tools, techniques, and standards for effective design communication. Prereq: INTD 3100 or INTD 5100. Restriction: Restricted to students in the Interior Design Minor. Cross-listed with INTD 6200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: INTD 3100 or INTD 5100. Restriction: Restricted to students in the Interior Design Minor.
Typically Offered: Fall.

International Business (INTB)

INTB 1000 - Special Topics (3 Credits)
This topics course at the 1000 level is designed to offer flexibility for the International Business department for lower division special topics classes that are occasionally offered. Students may enroll up to 3 times to total no more than 9 credits but the topics must differ for each course. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

INTB 1111 - International Social Entrepreneurship (3 Credits)
The end of the 20th Century saw the rise of a powerful new force: the International Social Entrepreneur. Leveraging the power of market forces, social media, the internet, and the desire to make the world better, these people have developed powerful ways to tackle the social, economic, and environmental problems that confront us all. In this class, we will study the rise of international social entrepreneurship, and the innovative tools international social entrepreneurs have developed to address some of our most dire challenges. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

INTB 2939 - Internshp (1-3 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.

INTB 3000 - Global Perspectives (3 Credits)
Globalization brings both opportunities and anxieties that need to be fully explored, discussed and understood both by the business and non-business student. This interdisciplinary course is designed to stimulate thought, perspective, discussion and debate for business and non-business students on issues ranging from globalization; political economy and geopolitics; the environment; cultures; finances; economic integration; trade; global regions; emerging markets; human rights; terrorism and conflict; leadership, ethics and values; entrepreneurship, to future trends in global issues. The Global Perspective course is designed (1) to increase and promote both business and non-business students' capacity for international understanding and international enterprise through the study and discussion of global business environment-related issues from multiple points of views in a neutral forum. (2) It is to provide students with the awareness that global issues cannot be viewed in isolation, Restriction: Restricted to undergraduate majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Additional Information: Denver Core Requirement, International Perspectives.

INTB 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4028 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with ENTP 4028, ENTP 6028, and INTB 6028. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4200 - International Marketing (3 Credits)
Studies managerial marketing policies and practices of firms marketing their products in foreign countries. Analytical survey of institutions, functions, policies, and practices in international marketing. Relates marketing activities to market structure and environment. Cross-listed with MKTG 4200. Prereq: MKTG 3000 with a C- or higher. Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a C- or higher.
Additional Information: Denver Core Requirement, International Perspectives.

INTB 4370 - International Financial Management (3 Credits)
Financial management in the international environment. Topics include international capital movements; international operations as they affect the financial functions; foreign and international institutions; and the foreign exchange process. Also considers foreign exchange theory and risk management, financial requirements, problems, sources, and policies of firms doing business internationally. Cross-listed with FNCE 4370. Prereq: FNCE 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher

INTB 4400 - Environments of International Business (3 Credits)
An overview of the environmental complexities that arise when business activities and firms cross national borders. Key international business environmental complexities associated with country differences, cross-border trade and investment, and global monetary system are examined. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level. Cross-listed with MGMT 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level.

INTB 4410 - Operations of International Business (3 Credits)
Focuses on the impact of environmental factors on international business operations and the identification and analysis of complex strategic and operational issues facing business firms in global markets. The strategies and structures of international businesses, alternative foreign market entry modes, and the unique roles of various business functions at international business firms are explained and assessed. Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 4410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

INTB 4840 - Independent Study (1-8 Credits)
Instructor approval required. Allowed only under special and unusual circumstances. Regularly scheduled courses cannot be taken as independent study. Restriction: Restricted to undergraduate business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

INTB 4950 - Special Topics in International Business (3 Credits)
Current topics in international business are occasionally offered. Consult the 'Schedule Planner' for specific course offerings or contact an advisor for information. Prereq: Topics vary depending on the topic and the instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

International Studies (INTS)

INTS 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

INTS 2020 - Foundations of International Studies (3 Credits)
Through a combination of lecture, discussion, and hands-on learning activities, students will develop skills and abilities necessary for academic and professional success in the international studies arena, especially critical thinking, connection building, conceptual understanding, and cultural awareness. The course is structured in three phases: (1) core interdisciplinary concepts; (2) regional foci; and (3) global issues. Note: Students may not receive credit for INTS 2020, if they have already received credit for INTS 2000. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

INTS 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, PHIL 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

INTS 3939 - Internship (1-6 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

INTS 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, ETST 4002, RLST 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

INTS 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with COMM 4152, RLST 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

INTS 4611 - Rhetoric of Global Food Policy (3 Credits)
This course examines stakeholder relations, agendas, and debates about global food policy using rhetorical concepts and analysis. Topics include the framing of debates about agriculture, hunger and obesity, the greening of food governance, sustainable food systems, and more. This course fulfills the communication department's pathway course requirement. Cross-listed with COMM 4611. Prereq: Junior standing or higher. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

INTS 4700 - Special Topics (3 Credits)
Note: May be taken more than once for credit when topics vary. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

INTS 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of international studies. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

INTS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

INTS 4990 - International Studies Capstone (3 Credits)
A capstone course for students in the International Studies major, the class is designed to facilitate independent student research in the field of international studies and assist students in developing advanced writing and communication skills. Prereq: Students in the course must be declared international studies majors in their final year of coursework (senior status is recommended preparation). Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to International Studies Majors only
Typically Offered: Fall.

INTS 4995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with INTS 5995. Term offered: Fall, Spring, Summer. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Fall, Spring, Summer.

Inworks Innovation Initiative (IWKS)

IWKS 2100 - Human-Centered Design, Innovation and Prototyping (3 Credits)
Introduces collaborative interdisciplinary design and innovation from a human perspective. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Prereq: none. Participants of all backgrounds are encouraged to register; no previous design or prototyping experience is required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 2300 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with ENGR 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 3100 - 3D Design, Computation and Prototyping (3 Credits)
Introduces the design and computer-controlled fabrication of three-dimensional objects using both additive (3D printing) and subtractive (laser cutter, CNC router/mill) processes. Increasingly complex projects throughout the semester using various CAD/CAM software tools will explore design strategies for digital fabrication. Prerequisites: None; no previous design or prototyping experience is expected or required. Cross-listed with IWKS 5170 and ARCH 3706. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3180 - Inworks: Choose Your Own Adventure: Experiences in Design, Innovation and Prototyping (1-3 Credits)
Provides weekly speakers, workshops and other experiences that educate and enrich across the design, innovation and prototyping landscape. Students may choose to participate in any five (for one credit), ten (for two credits) or fifteen (for three credits) activities. Each week, participating students will attend the scheduled activity, and then create a meaningful response that reflects the impact of that activity on their thinking or practice. Prerequisites: None. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

IWKS 3200 - Data Science for Innovators (3 Credits)
Introduces techniques for capturing, processing, visualizing, and making meaning out of large datasets. With the exponential growth and decreasing cost of data collection tools such as genome sequencing, social media, crowd sourced data, mobile phone apps, remote sensors, and data from other publically available sources, innovators are able to harness a rich array of data in their designs. This course will introduce the fundamentals of working with online data and large data sets, introduce widely used data analysis and visualization tools, and culminate in a cumulative project that incorporates data in a significant way. Suggested Background: IWKS 2300 or similar experience. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

IWKS 3300 - NAND to Tetris: Foundations of Computer Systems (3 Credits)
Introduces the principles of computer systems that underlie the global information age. Starting from first principles, students gradually construct a simple hardware platform and a modern software hierarchy, yielding a working basic yet powerful computer system. Only introductory programming experience is required. Suggested Background: IWKS 2300 or similar computing experience. Cross-listed with CSCI 2940. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3400 - Game Design and Development I (3 Credits)
Introduces principles of computer game development, building on the rich interplay of computer science, graphics design, physics, music, and narrative. Students develop interactive 2D and 3D games and a final project. Substantial software development involved, but requires only introductory programming experience. Suggested Background: IWKS 2300 or similar computing experience. Cross-listed with CSCI 2941. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3540 - Synthetic Biology for Innovators (3 Credits)
Introduces the fundamentals of synthetic biology for those who seek to use it as tool for innovation. Synthetic biology allows us to engineer new biological systems and redesign existing biological components by integrating aspects of biotechnology, evolutionary and molecular biology, systems biology, computer engineering, computational biology, and genetic engineering. Advancement in technological tools and techniques make this material accessible to motivated individuals from many disciplines, and no biology background is required. Culminates with a final team project focused on designing synthetic biology solutions that address human need. Suggested Background: None. No previous background in biology is required. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3550 - Innovation Law and Policy (3 Credits)
Introduces legal and regulatory foundations related to innovation, including intellectual property, telecommunications, electronic commerce, the Internet, biotechnology, ethical and equity considerations, and financing. These issues are examined from the perspectives of the legal, business, capital, development, consumer, and policy-making communities. Suggested background: IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3600 - Innovating for the Developing World (3 Credits)
Explores the design and development of products and services that can be sustainably and gainfully used by the world's poorest citizens. Students in interdisciplinary teams will design, implement and evaluate viable solutions to a real problem faced by people in the developing world. The goal is to develop an understanding of the extraordinary challenges faced by individuals for whom basic survival is not a given, and the knowledge and skills necessary to create designs that respond appropriately to those unique circumstances. Provides a foundation for further study and practice in the area of technology and development. Suggested Background: IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3620 - Mobile App Development (3 Credits)
Introduces mobile application development, including front-end mobile application clients, data handling, connectivity to back-end services and cloud hosting. The course provides an overview and comparison of technical approaches employed by Apple iOS, Google Android, and cross-platform development environments. Students will install, develop, test, and distribute mobile applications while addressing challenges associated with development for any mobile platform: limited screen size and memory, gesture based GUI, varying connectivity, and the wide variety of target mobile devices. Suggested Background: IWKS 2300 or similar computing experience. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3700 - Innovation and Society (3 Credits)
Analyzes impact of innovative design on work, sense of self and social systems, in education, healthcare, finance, and other sectors. Investigates how people customize / "hack" technologies they use, and the moral / ethical implications of being designers. Students will research the impact of an innovation of their choice and share via essays, models, videos, or another medium of their choice. Suggested Background: None. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 3850 - Product Design (3 Credits)
Explores the design requirements associated with creating a product that will be manufactured in large quantities and used by potentially thousands of users. These requirements are often very different from those associated with creating a working prototype. This gap between prototype creation and starting a business offers an interesting and unique set of design challenges. As part of the course, teams of students will engage in a realistic product design cycle. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4100 - Human-Centered Design, Innovation and Prototyping (3 Credits)
Offers a graduate-level introduction to collaborative interdisciplinary design and innovation from a human perspective, as well as introducing key theoretical and computational foundations of innovation. Using the wide array of Inworks prototyping facilities, teams of students will design and implement human-oriented projects of increasing scale and complexity, in the process acquiring essential innovation and problem-solving skills. Prerequisite: None. No previous design or prototyping experience is expected or required. Cross-listed with IWKS 5100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4120 - IoT: The Internet of Things (3 Credits)
In a world where everything is connected to everything else, how does that work? This course introduces techniques for (1) designing systems that can sense the environment and respond to humans in meaningful ways and (2) creating networks of physical objects that collect and exchange data. Such systems might include wearable sensors, interactive art, and Internet-connected home devices. Working individually and in teams, students will develop projects using Inworks' materials, devices, and fabrication tools. The course involves considerable prototyping and software development but requires only introductory programming and prototyping experience. Suggested Background: IWKS 2100 & 2300. Cross-listed with CSCI 2942. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4450 - Game Design and Development II (3 Credits)
Continuation of IWKS 3400, with increased emphasis on more advanced techniques including 3D rendering; lighting simulation; vertex, pixel and geometry shaders; shadows; terrain building; bump, parallax, and parallax occlusion mapping; shading; ray tracing; bloom; and high dynamic range lighting. Suggested Background: IWKS 3400. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4500 - Bio-Design and Innovation (3 Credits)
Introduces the biodesign innovation process, which involves identifying important human needs and inventing meaningful solutions to address them. The course examines how biotechnology and bio-inspired innovation improve the form and function of our design world through innovative materials and novel approaches to developing buildings, food, medicine, infrastructure and more. Readings and in-class debates will raise critical issues in contemporary bioethics. For their final projects, students will choose to create and prototype a speculative biodesign concept, or work in the bio lab on the development of a real-world biodesign solution of their choosing. Suggested Background: IWKS 2100 & 3100. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4520 - Design for Healthful Human Longevity (3 Credits)
Introduces contemporary studies, therapies, theories, and research on aging, age related disease, and innovations for longer healthier human lives. Guest lecturers, seminar discussions, readings and discussions will inform student projects that address challenges to prolonged, healthy, disease-free lives. Suggested Background: IWKS 2100 and 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4650 - Innovating for the Developing World (3 Credits)
Explores the design of products and services that can be sustainably used by the world's poorest citizens. Students design, implement and evaluate solutions to real problems in the developing world. Provides a foundation for further study and practice. Suggested Background: IWKS 3500 & 3600. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4680 - Case Studies in Design (3 Credits)
Explores why some projects succeed and others fail. Many human-centered interventions fail to meet their designers' objectives, reflecting the unique challenges associated with matching human need with feasibility. Explores how innovators can increase their chances for success by examining several successful (and unsuccessful) designs. Suggested Background: IWKS 2100 & 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4700 - Unconventional Design for Online Learners (3 Credits)
Explores how design-thinking and user-centered design can be used to develop and improve technology-mediated learning. Using a team-based project-oriented approach, students design, develop, and evaluate new modalities for digital education. Projects include ways to educate both general and targeted audiences. Suggested Background: IWKS 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

IWKS 4800 - StartUp: Creating a New Venture from Scratch (4 Credits)
Teams of students are guided to create and launch a new company in a single semester. Culminates in a "pitchfest" to area entrepreneurs and venture capitalists. One of two alternative capstone courses for the Inworks Minor in Design and Innovation. Requires enrollment in the Inworks HCDI minor or certificate, or instructor permission. Suggested Background: Completion of at least three other Inworks courses. Max hours: 4 Credits.
Grading Basis: Letter Grade

IWKS 4900 - Undergraduate Capstone (4 Credits)
Working closely with project sponsors, students design, implement, and evaluate a project for use in local industry and non-profit organizations. One of two alternative capstone courses for the Inworks Minor in Design and Innovation. Prereq: IWKS 2100 and enrollment in the Inworks HCDI minor or certificate. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: IWKS 2100 and enrollment in the Inworks HCDI minor or certificate

IWKS 4930 - Special Topics in Human Centered Design and Innovation (1-4 Credits)
Emergent issues and professional developments in design, innovation and prototyping. Consult the current online Inworks Course List for semester offerings as new special topics courses are frequently added. With permission, may be repeated for credit. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

IWKS 4970 - Independent Study in Human Centered Design and Innovation (1-4 Credits)
Studies initiated by students or faculty and sponsored by a faculty member to investigate a special topic or problem related to design, innovation and prototyping. With permission, may be repeated for credit. Enrollment requires permission of an Inworks faculty member. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Landscape Architecture (LDAR)

LDAR 1015 - Engaging Landscapes for Wicked Change (3 Credits)
This course will offer students the tools and perspectives to understand how landscapes impact them and others, analyze and describe the forces that inform landscape form, and propose changes to landscapes that will address the wicked problems of our time. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

LDAR 3601 - Intro to Landscape Arch: Engaging Designed Landscape (3 Credits)
This course is an overview of the historical development, social context and contemporary practice of landscape architecture, which has existed as a profession for over 120 years and has been practiced in one form or another for millennia. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 3690 - Landscape Architecture in Other Cultures (1-9 Credits)
Study abroad. Various studies of landscape architecture, architecture, urbanism, and design to destinations outside of the continental United States. Cross-listed with LDAR 6520. Restriction: Restricted to Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restrictions: Restricted to Junior standing or higher.

LDAR 4420 - Landscape Architecture Theory and Criticism (3 Credits)
Explores and assesses theory in landscape architecture and the concepts, ideas and discourses underlying contemporary design approaches. Emphasizes developing critical understanding of the roles and agency of theoretical inquires in landscape architecture in relation to aligned disciplines. Restriction: Restricted to undergraduate students in the College of Architecture and Planning or instructor permission. Cross-listed with LDAR 6620. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Spring.

LDAR 4421 - History of Landscape Architecture (3 Credits)
Intro survey course fosters workable understanding of landscape architecture design history and theory and offers a base for understanding trends and ideas influencing contemporary practice. Emphasizes Western Europe and the United States from antiquity to early twentieth century. Prereq: Sophomore standing or higher. Cross-listed with LDAR 5521. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students must be of sophomore-, junior-, or senior-level standing

LDAR 4430 - Site, Society and Environment (3 Credits)
Sites are defined by relationships within environmental and social settings. Therefore site design should be primarily ethical and secondarily technical. This course examines the implications of this idea through site methodologies, conceptual construction of site, site analysis and site typologies. Restriction: Restricted to students with sophomore standing or higher. Cross-listed with LDAR 6630. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students with sophomore standing or higher

LDAR 4432 - Landform Manipulation (3 Credits)
Focuses on the fundamental technical aspects of landscape architectural design and site engineering of related topography, grading, drainage design, landform manipulation, earthwork calculations, and road alignment. Restriction: Restricted to undergraduate students in the College of Architecture and Planning or instructor permission. Cross-listed with LDAR 5532. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

LDAR 4435 - Community Engaged Design Practice (3 Credits)
Obtain real-world pre-design and conceptual design experience in complex urban environments focusing on evolving trends in sustainability. Using digital trans-disciplinary learning students will develop comprehensive sustainable strategies that draw from their own sustainable philosophy developed during this class. Cross-listed with LDAR 6635 and ARCH 6257. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 4436 - Urban and Local Food Systems (3 Credits)
In this seminar, we will examine the connections between landscape architecture and food production in cities as well as the role that food production plays in rural landscapes. The course material may be historical, theoretical, or oriented toward contemporary research. Cross-listed with LDAR 6636. Restriction: Restricted to undergrads with sophomore standing or higher. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with sophomore standing or higher

LDAR 4470 - Plants in Design (3 Credits)
Explores the challenges, opportunities and responsibilities of designing with living, growing, and ever-changing organisms. Students learn to identify plants that are commonly used in the Colorado region and the principles, theories, methods, and techniques for planting design. Restriction: Restricted to undergraduate students at a junior standing or higher. Cross-listed with LDAR 6670. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

LDAR 4472 - Ecology for Landscape Architects (3 Credits)
Course emphasizes continuity and change in an ecology of the natural and man-made landscape. Focuses on biological, geophysical, cultural, and perceptual factors involved in landscape, spatial organization, and urban and regional structure. Introduces field ecology for landscape architecture. Restriction: Restricted to undergraduate students in the College of Architecture and Planning, or instructor permission. Cross-listed with LDAR 5572. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students in the College of Architecture and Planning.
Typically Offered: Fall.

LDAR 4486 - Special Topics in Landscape Architecture (3 Credits)
Lectures, discussion, and projects exploring topics in landscape architecture drawn from current practice, contemporary issues of design and the built environment, and/or landscape history and theory. Focus and content vary each term. Prereq: Sophomore standing or higher. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Students must be of sophomore-, junior-, or senior-level standing

Latin (LATN)

LATN 1010 - Elementary Latin I (5 Credits)
Introduces grammar, syntax, and vocabulary of Classical Latin, with an emphasis on preparing students to read Latin while improving English grammar and vocabulary skills. Two semesters of Latin may be used to fulfill the CLAS language competency requirement. Term offered: fall. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

LATN 1020 - Beginning Latin II (5 Credits)
Completes the presentation of basic Latin grammar, syntax and vocabulary. Introduces students to Latin literature through readings in select authors adapted to meet the needs of beginning students. Note: This course assumes that students have passed LATN 1010 or equivalent, or have taken one year of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 1010 is recommended for success in this course. Term offered: spring. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

LATN 1050 - Vocabulary for Professionals (3 Credits)
Studies English words derived from Latin and Greek by analyzing their component parts (prefixes, stems, and suffixes). Cross-listed with ENGL 1050. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2010 - Intermediate Latin I (3 Credits)
Introduces advanced Latin grammar, vocabulary, syntax, and stylistics of Latin prose via readings in Caesar, Cicero and Livy. Includes review of basic Latin grammar, plus introduction to Latin prose composition and Latin rhetoric. Emphasis on historical, cultural, social context of authors and works. Note: This course assumes that students have passed LATN 1020 or equivalent, or have taken two years of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 1020 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2020 - Intermediate Latin II (3 Credits)
(Continuation of LATN 2010.) Completes the presentation of advanced Latin grammar, vocabulary, syntax, and stylistics of Latin prose. Continues the study of Latin prose composition and Latin rhetoric with emphasis on historical, cultural, and social context of authors and works. Note: This course assumes that students have passed LATN 2010 or equivalent, or have taken three years of high school Latin, or possess equivalent proficiency. A grade of C- or higher in LATN 2010 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

LATN 2840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

LATN 3000 - Medical Terminology (3 Credits)
The course enables students to understand medical terms by learning the Greek and Latin word elements that form these terms. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

LATN 3840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

LATN 4840 - Independent Study (1-3 Credits)
Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Linguistics (LING)

LING 2000 - Foundations of Linguistics (3 Credits)
Provides students with the foundations of the scientific study of language. Examines core areas within theoretical linguisitics, sociolinguistics, historical linguistics, language acquisition, and writing systems, using a variety of languages. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences. Typically Offered: Fall, Spring.

LING 3100 - Language in Society (3 Credits)
Introduces students to language use in the context of American society. Examines the interaction between language and age, gender, race, ethnicity, education, income, social class, language attitudes, policy and politics. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity. Typically Offered: Fall, Spring.

Literacy, Lang, & Culturally Responsive Teaching (LCRT)

LCRT 2000 - Rebels, Villains, & Superheroes: How Children's Literature Shapes Our Identities (3 Credits)
This course explores both classic and contemporary children's and adolescent literature and media in traditional and digital texts, specifically focusing on developing literary understandings, exploring perspectives and personal responses to literature, and inquiring into trends and issues. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities.

LCRT 3720 - Introduction to Writing Development and Teaching (3 Credits)
This course introduces students to writing development in children from early childhood through 5th grade. Students will learn how to analyze student writing for strengths and needs in order to design effective writing instruction. Prereq or coreq: EDHD 2930 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 2930 and LCRT 4710. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours.

LCRT 3815 - Once Upon a Time: Family Literacies in Culturally Diverse Communities (3 Credits)
This course uses sociocultural theory and perspectives as these relate to family systems and the intersection of culture, literacies, and education. Students develop an understanding about the ways reading, writing and language are embedded in family's homes, schools, and communities. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

LCRT 4000 - Elementary Literacy Instruction and Assessment Part 1 (3 Credits)
This course develops an appreciation, understanding, and application of literacy assessment and instruction in PK-6 classrooms. Interns learn how to use various types of assessment and instruction for reading and writing that address the literacy needs of PK-6 Students. Cross-listed with LCRT 5000. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4001 - Elementary Literacy Instruction and Assessment Part 2 (3 Credits)
This course develops an appreciation, understanding, and application of literacy assessment and instruction in PK-6th classrooms. Interns learn how to use various types of assessment and instruction for reading and writing that address the literacy needs of PK-6th Students. Cross-listed with LCRT 5001. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4100 - Secondary Literacy Instruction and Assessment (3 Credits)
Provides knowledge and practice in using specific literacy methods to enhance students' content learning and literacy development in middle schools and high schools. Various methods of literacy assessment to guide instruction for students are emphasized. Instructional strategies for special populations, especially speakers of English as a second language, are also addressed. Cross-listed with LCRT 5100. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4200 - Theory and Methods of Teaching Secondary English (3 Credits)
Focuses on teaching/learning theories and practical classroom strategies for teaching English Language Arts to adolescent learners in middle school, junior high school and high school classes. Cross-listed with LCRT 5200. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4201 - Adolescent Literature (3 Credits)
Reading and evaluating fiction and non-fiction appropriate for students in middle and senior high school. Emphasis is on modern literature. Cross-listed with LCRT 5201. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

LCRT 4210 - Literacy Development Pre K-3rd Grade (3 Credits)
Focuses on children's developing literacy understandings and proficiencies beginning in the preschool years. Attention is given to language development, assessment, and instruction in pre-kindergarten through third grade, partnerships with community literacy institutions provide information on their use for literacy development. Cross-listed with LCRT 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4220 - Literacy Routines & Assessment, Pre K-3rd Grade (3 Credits)
This course will focus on the routines and practices which allow for student specific instruction and assessment in the Early Literacy classroom. Participants will examine and critique current literacy routines and assessments needed to best meet the needs of culturally and linguistically diverse children. Cross-listed with LCRT 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4230 - Early Literacy Instruction (3 Credits)
Participants will examine Pre K-3rd grade literacy instruction to understand how to meet the needs of young students. The course will analyze instructional practices for young gifted, special needs and English language learning students to best meet the needs of all learners. Cross-listed with LCRT 5230 Max hours: 3 Credits.
Grading Basis: Letter Grade

LCRT 4710 - Primary Literacy for Diverse Learners: Pre K-3rd Grade (3 Credits)
This course provides teachers with a basic understanding of reading and writing development in preschool and early primary grades, while considering specific strategies for using and teaching reading and writing in early primary grades (pre-K-3). This course is cross-listed with LCRT 5710. Prereq or coreq: EDHD 2930 and LCRT 3720. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or coreq: EDHD 2930 and LCRT 3720. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours.

LCRT 4720 - Writing Development, Instruction and Assessment (3 Credits)
This course combines examination of current research into effective practices of teaching writing with students' own writing projects. The curriculum serves teachers in all subjects and grades K-12. Readings, groupings, and discussions are differentiated according to specific grade(s) taught. Cross-listed with LCRT 5720. Max hours: 3 Credits.
Grading Basis: Letter Grade

Management (MGMT)

MGMT 1000 - Introduction to Business (3 Credits)
This course will introduce students to the nature and role of business in our society. Problems confronting business are surveyed from a management, financial, economic and marketing viewpoint. Career opportunities in business are also considered. Students are advised to take this course during their freshman year and may not take it in the junior or senior years. Prereq: Open to freshman and sophomores, non-degree students and music majors at all levels. Cross-listed with BMIN 1000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MGMT 1111 - Business Freshman Seminar (3 Credits)
This course introduces students to the nature and role of business in our society. Career opportunities in business are also considered. This course is designed to assist first year students transition to life on campus. The course content is integrated with various activities designed to familiarize 1st year students with school resources, develop critical thinking and writing skills and build relationships critical to ongoing academic success. Students are advised to take this course during the first semester of their freshman year. Note: Credit will not be given for both MGMT 1111 and MGMT 1000. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

MGMT 2939 - Internship (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 3.

MGMT 3000 - Managing Individuals and Teams (3 Credits)
Focuses on helping students understand how to manage individuals and groups effectively. Students are encouraged to know themselves better and how their behavior affects how they deal with organizational situations; they also learn how individuals differ and how to design, manage and work in a team. Oral and/or written communication skills are applied in this course. This is a business core course therefore a grade of a 'C' or better must be earned to satisfy graduation requirements. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher

MGMT 3010 - Managing People for a Competitive Advantage (3 Credits)
Provides an overview of the management of human resources in organizations. Areas of study include recruitment, selection, training, career development, performance appraisal, compensation and employee or labor relations. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3111 - Business Transfer Student Seminar (1 Credit)
This course is designed to assist first year transfer students transition to UC Denver. The course includes various activities designed to familiarize students with University and Business School resources, develop critical thinking, writing, time management and study skills, and build relationships critical to ongoing academic success. Students are advised to take this course during their first or second semester at UC Denver. Concurrent registration in MGMT 3000 is required. Cross-listed with MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 1 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3420 - Ethics: A Formula for Success (3 Credits)
Students will learn how to spot and address red flags that foster unethical behavior in both publicly-traded and privately-held businesses. Governance and stakeholder management techniques that incentivize ethical behavior will be highlighted using examples of companies that are financially successful by "doing the right thing." Principle-based ethics are emphasized, namely, integrity, trust, accountability, transparency, fairness, respect, viability, and compliance with the rule of law. Cross-listed with MGMT 6420, ISMG 4785, and ISMG 6885. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3830 - Business and Sustainability (3 Credits)
Business activity can have significant environmental and societal impacts. This course examines some of the ways that companies and consumers are reducing their impact on communities and the environment. Sustainability issues will be considered from a management, finance, marketing, and consumer perspective. Climate change and renewable energy will be featured topics in the class. Prereq: MKTG 3000. Cross-listed with MGMT 4830, BUSN 6830. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4028 - Travel Study Topics (3 Credits)
Join your classmates in an international travel study course to understand the business operations of another culture. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Additional Information: Global Education Study Abroad.

MGMT 4100 - Leveraging Diversity and Inclusion in Business (3 Credits)
Practical and policy issues that arise from living and working in a multicultural world in order to promote informed, effective management. Particular emphasis is given to the development of innovative approaches to managing the challenges posed by a work force that differs in characteristics, such as race, gender, ethnicity, age, lifestyle and disability. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate students at a junior standing or higher
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

MGMT 4120 - Collaborative Experiential Learning (3 Credits)
Explores the place and role of architecture as an instrument of critical social engagement and cultural change. Business students will collaborate with Arch students to explore the role of history and precedent in the design process through client driven projects that demonstrate their proficiency in applying business analysis to project design. Prereq: Senior standing. Restriction: Restricted to undergraduate Business majors. This course will be in collaboration with ARCH 4120. Note: this class will fulfill the Business Schools experiential learning requirement. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing. Restriction: Restricted to undergraduate Business majors.

MGMT 4140 - Negotiation Skills/Property: Effective Strategies (3 Credits)
Course covers real and personal property law, including ownership, title, landlord/tenant, easements, environmental law, and zoning. Emerging issues in intellectual property are also reviewed, including U. S. law and international treaties and agreements. Negotiation techniques through role-playing are emphasized. NOTE: This course is an elective course and my not be used to fulfill the CORE BLAW 3050 course. Meets concurrently with BLAW 4140. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4230 - Sports Management (3 Credits)
This course is designed as a speaker series of sports and entertainment industry elite focusing on: industry trends, strategic planning, managing revenue streams, managing media, managing for effectiveness, managing post-merger integration, leadership and leading change. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Typically Offered: Fall, Spring.

MGMT 4231 - Managing Sports Finance (3 Credits)
This course explores the problems and solutions of financing in the sports industry. It focuses on stadium/venue financing, sports team valuation, event guarantee estimation, player salary issues, and managing disparate revenue streams. The course utilizes speakers, articles, problem sets, and cases. Prereq: DSCI/BANA 2010 and ACCT 2200 both with a grade of C- or higher, ECON 2012 and ECON 2022. Coreq: FNCE 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI/BANA 2010 and ACCT 2200 both with a grade of C- or higher, ECON 2012 and ECON 2022 Coreq: FNCE 3000 Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4330 - Mastering Management (3 Credits)
Experiential learning course designed to give students hands-on practice developing critical management skills such as: negotiation, conflict management, group consensus-building, and interpersonal feedback and communication. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4350 - Leading Organizational Change (3 Credits)
Focuses on the tasks and skills of a leader in leading organizational changes. Topics include: diagnosing problems, creating urgency, building the change team, creating a vision, implementing change strategies, sustaining the momentum and making change stick. These tasks and skills are studied in various organizational change contexts. Prereq: MGMT 3000 with a grade of C or higher. Coreq: MGMT 4370. As a corequisite, MGMT 4370 can be taken concurrently or completed prior. If completed prior, must earn a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Prereq or Coreq: MGMT 4370. Can be taken concurrently or completed prior with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4370 - Organization Design (3 Credits)
Examines how to structure organizations to perform effectively. Addresses the effects of computer-based information technologies (e.g. intranets, extranets, and the internet) on firm structure, strategy, and culture. Emphasis is placed on the role of the task, technology, and the environment as constraints on organizational design. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4400 - Environments of International Business (3 Credits)
An overview of the environmental complexities that arise when business activities and firms cross national borders. Key international business environmental complexities associated with country differences, cross-border trade and investment, and global monetary system are examined. Prereq: MGMT 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level. Cross-listed with INTB 4400. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher and SPAN-BA majors with a SPP subplan at junior level.

MGMT 4410 - Operations of International Business (3 Credits)
Focuses on the impact of environmental factors on international business operations and the identification and analysis of complex strategic and operational issues facing business firms in global markets. The strategies and structures of international businesses, alternative foreign market entry modes, and the unique roles of various business functions at international business firms are explained and assessed. Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with INTB 4410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: INTB 4400 or MGMT 4400 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4420 - HR: Talent MGT (3 Credits)
This course explores the many aspects of Talent Management including strategic talent planning, recruiting and acquisition, employee development, performance management, engagement and retention, succession planning, and compensation, with a strong focus on recruitment and acquisition. The course demonstrates how each aspect of Talent Management is interdependent. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4430 - Human Resources Management: Training (3 Credits)
Covers training methods, theories, research findings. Students design and deliver their own training program, including collecting and analyzing metrics to gauge training success. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 6720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4440 - Human Resource Management: Performance Management (3 Credits)
Focuses on the design and implementation of human resource management systems to assess and enhance employee performance. Areas of study include performance definition and measurement, goal setting, feedback, employee development, rater training, and pay for performance. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: MGMT 3010. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

MGMT 4450 - Human Resources Management: Compensation (3 Credits)
Develop and administer pay systems considering economic and social pressures, traditional approaches and strategic choices in managing compensation. Current theory research and practice. Students design a compensation strategy and a system that translates that strategy into reality. Prereq: DSCI 2010 or BANA 2010 with a grade of 'C-' or higher. Coreq: MGMT 3010. As a corequisite, MGMT 3010 can be taken concurrently or completed prior. If completed prior, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 6740. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI 2010 or BANA 2010 with a grade of 'C-' or higher Prereq or Coreq: MGMT 3010. As prereq, must earn a D- or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4460 - Employee Benefits and Workforce Risk Management (3 Credits)
The course surveys an array of popular employee benefit programs to attract, protect, and retain valued employees. It also focusses on risk management programs that invest in human capital and address the downside risks of employing a workforce. Cross-listed with MGMT 6760 and RISK 4409/6409. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4481 - Human Resources Management: Career and employment coaching (3 Credits)
Focuses on enhanced approaches to discovering employment opportunities and providing career coaching, with an emphasis on unemployed veterans. Topics include discovering the unique capabilities a job-seeking veteran possesses, addressing the barriers to employment he or she may face, and methods the job seeker can use to educate prospective employers about the contributions to organizational success he or she can make. Cross-listed with MGMT 6781. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4482 - Human Resources Management: Connecting talent with business needs (3 Credits)
Focuses on methods for connecting businesses and public-sector organizations with job seekers who possess the capabilities that will fuel profitable growth and mission success. Topics include networking to establish relationships with hiring decisions makers, exploration conversations to identify an organization's success factors, and identifying job seekers (with a special emphasis on unemployed veterans) with the requisite skills, knowledge, traits, and aptitudes. Cross-listed with MGMT 6782. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4500 - Business Policy and Strategic Management (3 Credits)
Emphasis is on integrating the economic, market, social or political, technological, and components of the external environment with the internal characteristics of the firm; and deriving through analysis the appropriate interaction between the firm and its environment to facilitate accomplishment of the firm's objectives. Oral and/or written communication skills are applied in this course. Open only to business students in their graduation semester. This is a business core course therefore a grade of 'C' or better must be earned to satisfy Business graduation requirements. Prereq: Senior standing and completion of all business core courses with appropriate grade; Core = ISMG 2050, DSCI/BANA 2010, ACCT 2200, ACCT 2220, BLAW 3050 (or BLAW 3000) all with a 'C-' or higher; ISMG 3000, DSCI/BANA 3000, FNCE 3000, MGMT 3000, and MKTG 3000 all with a grade of 'C' or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or higher: ISMG 2050, BANA 2010, ACCT 2200, ACCT 2220, BLAW 3050 (or BLAW 3000). C or higher: ISMG 3000, BANA 3000, FNCE 3000, MGMT 3000, MKTG 3000, and senior standing. Restriction: Restricted to undergraduate majors in the Business School
Typically Offered: Fall, Spring, Summer.

MGMT 4770 - Human Resource Information Systems (3 Credits)
Focuses on the management of human resource information systems. It addresses how modern information systems tolls can provide better human resource intelligence to users in today's enterprises, allowing them to make better decisions. It examines how information about workforce and human resource management processes can be collected and used to set targets to meet strategic objectives, monitor performance, receive notifications when performance is below expectations and respond immediately by taking corrective actions. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4780 - Preparing A Business Plan (3 Credits)
Turn a new business idea into a viable new business by developing a comprehensive business plan including: analysis of the potential demand for the product or service and potential customers; identify competitive advantages and marketing strategies; generate pro forma financial projections; and,design the management team needed. Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher. For non-business majors only. Can be applied to Entrepreneurship Certificate. Business majors enroll in either MGMT 4780 or MKTG 4780. Come to first class meeting with a carefully considered business idea. Cross-listed with MKTG 4780 and ENTP 3780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3000 AND either ENTP 3500 with a grade of ‘C-‘ or higher or BLAW 4120 or ENTP 3120 with a grade of ‘C’ or higher.

MGMT 4824 - Sustainable Business/CSR Field Study (3 Credits)
Gain practical, hands-on experience with aspects of sustainable business and/or corporate social responsibility. Work with a local company/non-profit/or government organization under the direction of an executive to conduct a sustainability-focused project which is important to the organization’s sustainability initiative. Students may petition to use previous coursework or experience in sustainability to fulfill the prerequisite. Please contact the undergrad.advising@ucdenver.edu for more details. Prereq: MGMT 3830 or MGMT 4110 with a C or higher or department consent. Restriction: Restricted to undergraduate majors within the Business School. Cross-listed with MGMT 6824. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3830 or MGMT 4110 with a C or higher or department consent. Restrictions: Restricted to undergraduate majors within the Business School.

MGMT 4825 - Sustainable Change Leadership: Turning Business Into a Force for Good (3 Credits)
This course develops leadership from the perspective of managing the people side of change required to transform a traditional business to one that is not only financially successful but also a genuine “force for good” for our natural and social environment. The BLab Impact Assessment tool is used to measure, monitor, and link sustainable business practices to drive continuous improvement and innovation. Students will conduct hands-on, practical work with local businesses to develop change leadership skills as they relate to sustainability. NOTE: this course will satisfy the BGen requirement (experiential learning requirement). Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 6825. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4830 - Business and Sustainability (3 Credits)
Business activity can have significant environmental and societal impacts. This course examines some of the ways that companies and consumers are reducing their impact on communities and the environment. Sustainability issues will be considered from a management, finance, marketing, and consumer perspective. Climate change and renewable energy will be featured topics in the class. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with MGMT 3830, BUSN 6830. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MGMT 4832 - Law & Negotation in the Sports and Entertainment Industry (3 Credits)
This course provides an overview of major legal issues in the sports and entertainment industries. Students develop the skills required to negotiate contracts in these industries. Topics include contracts, copyright, trademark, employment and tort law principles relevant in the sports and entertainment fields. Prereq: MGMT 3000 with a grade of C (2.0) or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

MGMT 4834 - London Calling: Global Sports & Entertainment Management (3 Credits)
Through 2 weeks of visiting organizations with industry elite in London a broader perspective on the sports and entertainment industry is gained. Students will be asked to do advance reading, participate in discussions, keep a journal and write a reflection paper at the end of the experience. Site visits (to be confirmed) include: Arsenal Football Club, Premier League, the O2 Arena, NHL and NBA regular season games in London, 2012 Olympics Committee, Formula One, Hollywood Studio-International Finance Office, Theatre, Lord's Cricket Ground, All England Lawn Tennis Club/Wimbledon and the Office of the Minister of Sport. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 6834, MKTG 4834, and MKTG 6834. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

MGMT 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MGMT 4900 - Project Management and Practice (3 Credits)
Covers the factors necessary for successful management of system development or enhancement projects. Both technical and behavioral aspects of project management are discussed. The focus is on management of development for enterprise-level systems. Topics include: managing the system life cycle; requirements determination, logical design, physical design, testing, implementation; system and database integration issues; network and client-server management; metrics for project management and system performance evaluation; managing expectations: superiors, users, team members and others related to the project; determining skill requirements and staffing the project; cost-effectiveness analysis; reporting and presentation techniques; effective management of both behavioral and technical aspects of the project; change management. Oral and/or written communication skills are applied in this course. Note: Successful completion of this course meets the educational requirements to sit for both the PMP and CAPM exams. Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School. Cross-listed with ISMG 4900. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Students must be a junior status and have completed either: 1. ISMG 3000 or ACCT 4054 and MGMT 3000 and MKTG 3000, OR 2. ISMG 3000 and ISMG 3500 and ISMG 3600. Restriction: Restricted to undergraduate students in the Business School.

MGMT 4950 - Special Topics in Management (3 Credits)
A number of different topics in management are offered under this course number. Consult the 'Schedule Planner' for current course offerings. Prerequisites vary depending on the topic and instructor requirements. Cross-listed with MGMT 5800. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Marketing (MKTG)

MKTG 1000 - Introduction to Marketing (3 Credits)
Provides an introduction and overview of marketing. Discusses market and buyer analysis. Includes product planning, pricing, promotion and distribution of goods and services. For non-business majors only. Does not satisfy the MKTG 3000 business requirement. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to undergraduate majors outside the Business School.

MKTG 1001 - Introduction to Esports Business I (1 Credit)
Students will learn about the exciting world of Esports Business including Esports Marketing, Esports Sponsorships, and Esports fans and consumer behavior?. Other topics will include the following. What are the various types of Esports? What are the career opportunities in esports? Where are the jobs in esports? How do you prepare for a career in Esports? What skills do you need to succeed in the Esports Business. How do Esports Businesses generate revenue? How is Esports connected to traditional sports? How does Esports fit within the entertainment industry. What distribution models are used? Max hours: 1 Credit.
Grading Basis: Letter Grade

MKTG 2939 - Internship (1 Credit)
Introductory supervised experiences involving the applications, concepts and skills in an employment situation. Prereq: sophomore standing Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory
Restrictions: Restricted to sophomore standing or higher.

MKTG 3000 - Principles of Marketing (3 Credits)
Focuses on the basic marketing concepts of Buyer Behavior, Marketing Research, Marketing Planning and Implementation and the marketing process of product, price, distribution and promotion. This is a business core course therefore a grade of a 'C' or better must be earned to satisfy graduation requirements. Coreq: COMM 1001 or 2050. Note: Coreq of COMM 2050 needs to be completed with a C- or higher to satisfy the requirement. Restriction: Restricted to undergraduate students at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: COMM 1001 or 2050. Restriction: Restricted to undergraduate students at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

MKTG 3100 - Marketing Research (3 Credits)
Provides practical experience in research methodologies, planning an investigation, designing a questionnaire, selecting a sample, interpreting results and making a report. Techniques focus on attitude surveys, behavioral experiments, and qualitative research. Prereq: DSCI/BANA 2010 with a 'C-' or higher and MKTG 3000 with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: DSCI/BANA 2010 with a 'C-' or higher and MKTG 3000 with a grade of 'C' or higher Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 3200 - Consumer Behavior (3 Credits)
Focuses on improving the student's understanding of consumer and organizational buying behavior as a basis for better formulation and implementation of marketing strategy. Blends concepts from the behavioral sciences with empirical evidence and introduces buyer research techniques. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 3300 - Social Media in Business (3 Credits)
This course focuses on the fundamentals and practical skills of social media marketing. Topics include social interactions, social media metrics, social media ads, content marketing, viral and influencer marketing, the use of social media in marketing research, managing consumers via social media, as well as other trends in social media marketing. Students engage in hands on applications including the creation and management of real brands' social media marketing activities. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ISMG 3300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

MKTG 3939 - Internship (1-3 Credits)
Supervised experiences involving the application of concepts and skills in an employment situation. To enroll in an internship, students must work with the Experiential Learning Center on campus and have a 2.40 GPA or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4000 - Advertising (3 Credits)
Analyzes principles and practices in advertising from a managerial viewpoint. Considers the reasons to advertise, product and market analysis as the planning phase of the advertising program, media selection, creation and production of advertisements, copy testing, and development of advertising budgets. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4050 - Applied Marketing Management (3 Credits)
The course is designed to enhance the student's ability to formulate and implement a marketing plan and to better understand the relationship of marketing to other business functions. Emphasized application of marketing concepts through the use of cases, simulations or projects. Prereq: MKTG 3000 with a grade of 'C' or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4051 - Honors Applied Marketing Management (3 Credits)
MKTG 4051 is the honors version of 4050. It is designed to enhance the student's ability to formulate and implement a marketing plan and to better understand the relationship of marketing to other business functions. It will emphasize application of marketing concepts through the use of cases and projects. In the first half of the semester student teams will participate in the Media+Tech Innovation Challenge sponsored by the Media+Tech Collective (formerly Rocky Mountain Cable Association). The case will focus on a topic related to television/media content, its distribution and related technologies. This is the 15th year of the collegiate case competition (which will be virtual in 2021) which matches students with industry mentors and offers students networking opportunities and cash prizes. CU Denver students in the course will compete against students from DU and UCCS. The second half of the semester will include further application of marketing concepts through continuation of the case study competition topics and other cases and projects. Prereq: MKTG 3000 with a grade of 'C' or higher and a 3.0 GPA overall or within the B School. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Ideally students will have taken at least 9 hours in MKTG. Max hours: 3 Credits
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of 'C' or higher and a 3.0 cumulative GPA. Restriction: Restricted to undergraduate Business majors at a junior standing or higher

MKTG 4200 - International Marketing (3 Credits)
Studies managerial marketing policies and practices of firms marketing their products in foreign countries. Analytical survey of institutions, functions, policies, and practices in international marketing. Relates marketing activities to market structure and environment. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with INTB 4200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a C- or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

MKTG 4220 - Asian Business Development and Marketing (3 Credits)
This course investigates methods of Business Development and Marketing in the Asian Business Environment. It seeks to examine and explain methods of determining market potential and techniques tapping this market potential in this dynamic and rapidly growing business environment the course uses a combination of experienced guest speakers, Asian business cases and projects to develop the marketing skills in students to successfully compete in Asia. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4250 - Sports Marketing (3 Credits)
This course is designed to understand and evaluate the role and functions of marketing in sports organizations. The course seeks to evaluate the marketing function in sports as well as understand the behavior of fans as consumers, celebrity product endorsements, sponsorship of sporting events for all sport providers, sports intermediaries and channels and advertising and promotion in the sports world. The course is taught using lectures, guest speakers, cases and examinations. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4251 - Music and Media Marketing (3 Credits)
This course explores strategies, tactics and best practices utilized in the marketing of music, performing and dramatic arts. From recording artists and movie studios to repertory theater companies and symphony orchestras, artists and organizations need sound marketing strategies to engage audiences, sell tickets, and market merchandise to maintain profitable and sustainable operations. Restriction: Restricted to undergraduate Business Students with Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4252 - The Business of Sports (3 Credits)
This course focuses on strategic business issues in the sports industry. It covers business issues for both spectator sports and individual participant Sports. Spectator sports include football, basketball, hockey, baseball, extreme competitive sports, Olympic sports etc.). Participant sports include outdoor adventure Sports (e.g., Hiking, whitewater rafting, Biking), skiing, golf, tennis, and youth sports. Topics include industry trends, strategic planning, management challenges, financing in sports, and major legal issues in sports. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4580 - International Transportation (3 Credits)
Analysis of international transportation (primarily sea and air) in world economy. Detailed study of cargo documentation and freight rate patterns. Included are liability patterns, logistics, economics, and national policies of transportation. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring.

MKTG 4620 - Customer Service Strategies (3 Credits)
This course is designed to help students identify and effectively use managerial concepts of customer service. Students will develop an understanding of the concepts as well as knowledge of the strategies that will lead to higher levels of customer satisfaction, loyalty and ultimately customer retention. Students will have the opportunity to gain firsthand knowledge of these concepts and strategies through lectures, guest speakers, cases and projects. Prereq: MKTG 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4700 - Personal Selling and Sales Management (3 Credits)
Introduces the student to principles of personal selling and issues in managing the field sales force. Focuses on models of personal selling, recruiting, selection, training, compensation, supervision, and motivation, as well as organizing the field sales force, sales analysis, forecasting and budgeting. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4720 - Internet Marketing (3 Credits)
Distinctly influences the way marketers conduct marketing activities. The Internet media promises to establish marketing theories, identifies obsolete situations, explores how marketing functions have irreversibly changed as a result of the internet, and outlines basic marketing strategies for successful online marketing. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ENTP 4720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4730 - New Product Development for Consumer and Sports Products (3 Credits)
The creation of new products is essential in today's business environment. It is conducive to organizational growth and long-term survival. This course addresses the new product development process in depth. It introduces students to key concepts and issues. It also provides a series of practices which will help students deliver higher value and be more competitive. Prereq: MKTG 3000 with a C or higher. Restriction: Restricted to undergraduate Business majors at a junior standing or higher. Cross-listed with ENTP 4730. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4760 - Customer Relationship Management (3 Credits)
This marketing-theory driven course examines customer relationship management (CRM) as a key strategic process for organizations. Composed of people, technology and processes, effective CRM optimizes the selection or identification, acquisition, growth and retention of desired customers to maximize profit. Besides presenting an overview of the CRM process, its strategic role in the organization and its place in marketing, students have an opportunity to create simulated CRM database using popular software package that help to illustrate what CRM can do, its advantages and limitations. Prereq: MKTG 3000 with a grade of C or higher. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with ISMG 4760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MKTG 3000 with a grade of C or higher Restriction: Restricted to undergraduate Business majors at a junior standing or higher.

MKTG 4780 - Preparing Business Plan (3 Credits)
Turn a new business idea into a viable new business by developing a comprehensive business plan including: analysis of the potential demand for the product or service and potential customers;identify competitive advantages and marketing strategies;generate pro forma financial projections; and,design the management team needed. Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher. For non-business majors only. Can be applied to Entrepreneurship Certificate. Business majors enroll in either MGMT 4780 or MKTG 4780. Come to first class meeting with a carefully considered business idea. Cross-listed with MGMT 4780 and ENTP 3780. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENTP 3000 AND either ENTP 3500 with a grade of 'C-' or higher or BLAW 4120 or ENTP 3120 with a grade of 'C' or higher.

MKTG 4784 - Sales Negotiation (3 Credits)
This course focuses on developing advanced professional sales and negotiation skills utilized in successful organizations. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4800 - Marketing Seminar (3 Credits)
Offered to provide consideration of a wide variety of topical issues in marketing, such as, services marketing, pricing, product development or creative marketing strategies. Prereq: MKTG 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4834 - London Calling: Global Sports & Entertainment Management (3 Credits)
Through 2 weeks of visiting organizations and talking with industry elite in London a broader perspective on the Sports and Entertainment Industry is gained. Students will be asked to do advanced reading, participate in discussions, keep a journal and write a reflection paper at the end of the experience. Site visits (to be confirmed) include: Arsenal Football Club, Premier League, the O2 Arena, NHL and NBA regular season games in London, 2012 Olympics Committee, Formula One, Hollywood Studio-International Finance Office, Theatre, Lord's Cricket Ground, All England Lawn Tennis Club/Wimbledon and the office of the Minister of Sport. Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with MGMT 4834, MGMT 6834, and MKTG 6834. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MGMT 3000. Restriction: Restricted to undergraduate Business majors with junior standing or higher.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

MKTG 4840 - Independent Study (1-8 Credits)
Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

MKTG 4950 - Special Topics (3 Credits)
Courses offered on an irregular basis for the purpose of presenting new subject matter in marketing. Prerequisites vary depending upon the particular topic and instructor requirements. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to undergraduate Business majors with junior standing or higher

Math Content Knowledge for Ed (MCKE)

MCKE 3041 - Number and Operation (3 Credits)
First of three courses designed for prospective elementary teachers. Emphasis placed on the real number system and arithmetic operations. Explorations focus on place value, additive and multiplicative reasoning, the division algorithm and rational numbers. Content presented using problem solving and exploration. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MCKE 3042 - Algebra, Probability and Data Analysis (3 Credits)
Second of three courses designed for prospective elementary teachers. Emphasis placed on algebra, probability, and data analysis. Explorations focus on representing, analyzing, generalizing, formalizing, and communicating patterns and probabilities. Content presented using problem solving and exploration. Note: This course assumes that students have taken MCKE 3041. Max Hours: 3 Credits.
Grading Basis: Letter Grade

Math Education (MTED)

MTED 3040 - Mathematics for Elementary Teachers (3 Credits)
Key mathematical concepts for K-6 teachers informed by NCTM & Common Core State Standards, such as place-value number systems, rational, proportional, & algebraic reasoning, geometrical concepts, & statistical/probability ideas. Students' meaningful, enjoyable learning is promoted via problem solving activities. Cross-listed with MTED 5400. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4002 - Elementary Mathematics Teaching I (3 Credits)
Prepares elementary teachers to teach mathematics to PreK-6 students while applying principles of the National Council of Teachers of Mathematics to mathematical learning. Teachers explore ways to help all elementary students become flexible and resourceful mathematical problem solvers. Cross-listed with MTED 5002. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4003 - Elementary Mathematics Teaching II (3 Credits)
Develops the mathematical and pedagogical understandings and competence of elementary teachers, focusing on instructional assessment, principles, and practices. Cross-listed with MTED 5003. Prereq: MTED 4002 or MTED 5002. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MTED 4002 or 5002. Restriction: Professional Year Admission Required. ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4300 - Curriculum and Methods for Teaching Mathematics (3 Credits)
Fosters teachers' use of task-based mathematics pedagogy, including orchestrating students' mathematical discourse, to develop mathematics classrooms in which the teacher builds from students' current understandings, accommodates for students' differences, and has high expectations for all students. Cross-listed with MTED 5300. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4301 - Assessment and Equity in Mathematics Instruction (3 Credits)
Examines mathematics assessment and equity from both a teacher's and a student's perspective. Focuses on assessment as a process, during which a teacher gathers evidence of students' mathematical knowledge and understanding and then uses that evidence to make instructional decisions. Restriction: Professional Year Admission required. Cross-listed with MTED 5301. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

MTED 4621 - A World of (Different) Numbers: Quantity and Operation (3 Credits)
Develops K-12 teachers' understanding of number systems and the ability to foster students' understanding. Focuses on number, quantity, and operation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 5621. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4622 - Expanding Conceptions of Algebra (3 Credits)
Develops K-12 teachers' understanding of algebra concepts and the ability to foster students' understanding. Focuses on equivalence, variable, covariation, and function. Applicable to teaching students at all grade levels in line with the K12 Common Core Standards. Cross-listed with MTED 5622. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 4623 - Geometrical Ways of Reasoning (3 Credits)
Develops K-12 teachers' geometrical reasoning and the ability to foster students' reasoning. Addresses transformation, measurement, classification, objects, imagery, formulas, and investigation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 5623. Max hours: 3 Credits.
Grading Basis: Letter Grade

Mathematics (MATH)

MATH 1010 - Mathematics for the Liberal Arts (3 Credits)
Designed to give liberal arts students the skills required to understand and interpret quantitative information that they encounter in the news and in their studies, and to make quantitatively-based decisions in their lives. Topics include a survey of logic and analysis of arguments, identifying fallacies in reasoning, working with numbers and units, linear and exponential relations and essentials of probability and statistics. The emphasis is on applications with case studies in economics, finance, environmental sciences, health, music and science. Note: This course assumes that students have knowledge equivalent to three years of high school mathematics (two years of algebra). Requisite: In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 1011. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1
Grading Basis: Letter Grade
In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 1011.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1011 - Math for Liberal Arts Workshop (1 Credit)
Prepares students for college-level mathematics. Students receive one-on-one and small-group instruction on mathematics topics related to college level mathematics success. Coreq: MATH 1010. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MATH 1010
Typically Offered: Fall, Spring.

MATH 1060 - Finite Mathematics (3 Credits)
This course is designed to introduce students to mathematics topics commonly encountered by business students. This course meets the universities CORE mathematics requirement. The topics include linear equations and inequalities, linear, quadratic, exponential and logarithmic functions, simple, compound and continuous interest, future and present value annuities, amortization, systems of equations, linear programming, logic, sets and probability. Graphing technology is used extensively and business applications are emphasized throughout. Terms offered: Fall and Spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Mathematics.

MATH 1070 - College Algebra for Business (3 Credits)
Covers the same mathematical topics as College Algebra, MATH 1110, but with business applications. Note: Graphics calculator required. Note: Students may not receive credit for this course if they have already received credit for MATH 1110 or MATH 1130. Note: 24 on ACT-Math, 560 on SAT-Math or above average performance in intermediate algebra, algebraic literacy or integrated math are strongly recommended as preparation for this course. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics.

MATH 1080 - Calculus for Social Sciences and Business (3 Credits)
A one-semester course in single-variable calculus. Topics include limits, derivatives, differentiation rules, integration and integration rules. Emphasis is on applications to business and social sciences. Note: No knowledge of trigonometry is required. Those planning to take more than one semester of calculus should take MATH 1401 instead of MATH 1080. Prereq: MATH 1070 or MATH 1110 with a C- or higher is required for students to register for this course. No co-credit with MATH 1401. Max hours: 3 Credits.
Grading Basis: Letter Grade
MATH 1070 or MATH 1110 with a C- or higher
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.

MATH 1108 - Stretch College Algebra-Part 1 (3 Credits)
This course is the first half of a two-semester sequence (consisting of MATH 1108 followed by MATH 1109). The two-semester course sequence is equivalent to MATH 1110 (College Algebra). The topics in algebra are designed for students who intend to take the calculus sequence. An in-depth study of functions, linear and quadratic equations, circles, inequalities, domain & range, piecewise and transformation of functions, mathematical modeling and select other topics are explored. Desmos graphing technology is used extensively and students will review algebraic skills such as factoring and completing the square, graphing techniques and function properties where needed. Applications are emphasized. Note: No co-credit with MATH 1070, MATH 1110 or MATH 1130. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 1109 - Stretch College Algebra-Part 2 (3 Credits)
This course is the second half of a two-semester sequence (consisting of MATH 1108 followed by MATH 1109). The two semester course sequence is equivalent to MATH 1110 (College Algebra). The topics in algebra are designed for students who intend to take the calculus sequence. Data scatter plots and curve fitting, solving equations, polynomial functions, rational functions, exponential and logarithmic functions and selected other topics are explored. Desmos graphing technology is used extensively and students enrolled in MATH 1109 will review algebraic skills such as solving linear and quadratic equations, factoring and completing the square, graphing techniques and function properties where needed. Applications are emphasized. Note: No co-credit with MATH 1070, MATH 1110 or MATH 1130. Prereq: MATH 1108 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MATH 1108 with C- or higher.
Additional Information: Denver Core Requirement, Mathematics.

MATH 1110 - College Algebra (4 Credits)
Topics in algebra designed for students who intend to take the calculus sequence. Functions, domains, ranges, graphs, data scatter plots and curve fitting, solving equations and systems of equations, polynomial, rational, exponential and logarithmic functions and other topics. Applications are emphasized. Note: Students may not receive credit for this course if they have already received credit for MATH 1070 or MATH 1130. Prereq: MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA10 or MA30 or MA01 Student Group OR ALEKS PPL score 46-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA10 or MA30 or MA01 Student Group OR ALEKS PPL score 46-100.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: Fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

MATH 1120 - College Trigonometry (3 Credits)
Topics in trigonometry, analytic geometry, and elementary functions designed for students who intend to take the calculus sequence. Angles and trigonometry functions of acute angles, analytic trigonometry, fundamental trigonometric functions and identities including hyperbolic trigonometry, parametric equations, and polar coordinate system. Graphic calculators and/or computer algebra systems are used extensively. Applications are emphasized. Prereq: MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Students with a grade of B- or better in MATH 1110 or MATH 1070 pass the course at a much higher rate. No co-credit with MATH 1130. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1130 - Precalculus Mathematics (4 Credits)
Condensed treatment of the topics in MATH 1110 and 1120. Prereq: : MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. No co-credit with MATH 1070, 1110 or 1120. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
MATH 1120 or MATH 1130 or MATH 1401 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 1376 - Programming for Data Science (3 Credits)
The course introduces scientific computing using Python. Topics will include programming skills such as assignment, control statements, loops, and functions. Applications will focus on mathematical and data science topics. Prereq: MATH 1109 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 or MATH 2830 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100. Max hours: 3 Credits.
Grading Basis: Letter Grade
MATH 1109 or MATH 1110 or MATH 1120 or MATH 1130 or MATH 1401 or MATH 2830 with a C- or higher OR entry into the MA30 or MA01 Student Group OR ALEKS PPL score 61-100.

MATH 1401 - Calculus I (4 Credits)
First course of a three-semester sequence (MATH 1401, 2411, 2421) in calculus. Topics covered include limits, derivatives, applications of derivatives, and the definite integral. Note: No co-credit with MATH 1080. Prereq:MATH 1109 or MATH 1070 or MATH 1110 with a C- or higher and MATH 1120 with a C- or higher or MATH 1130 with a C- or higher or MATH 1401 with a C- or higher OR entry into the MA01 Student Group OR ALEKS PPL score 76-100. If you have any questions or concerns about this requisite, please notify MATH.Placement@ucdenver.edu. Max Hours: 4 Credits.
Grading Basis: Letter Grade
MATH 1109 or MATH 1070 or MATH 1110 with a C- or higher and MATH 1120 with a C- or higher or MATH 1130 with a C- or higher or MATH 1401 with a C- or higher OR entry into the MA01 Student Group OR ALEKS PPL score 76-100.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.

MATH 1840 - Independent Study. (1-3 Credits)
Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

MATH 2411 - Calculus II (4 Credits)
The second of a three-semester sequence (MATH 1401, 2411, 2421) in calculus. Topics covered include exponential, logarithmic, and trigonometric functions, techniques of integration, indeterminate forms, improper integrals and infinite series. Prereq: C- or better in MATH 1401. Note: Students with a grade of B- or better in MATH 1401 pass this course at a much higher rate. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 1401
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2421 - Calculus III (4 Credits)
The third of a three-semester sequence in Calculus (MATH 1401, 2411 and 2421). Topics include vectors, vector-valued functions, partial differentiation, differentiation, multiple integration, and vector calculus. Prereq: C- or better in MATH 2411. Note: Students with a grade of B- or better in MATH 2411 pass this course at a much higher rate. Term offered: fall, spring, summer. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1
Grading Basis: Letter Grade
Prereq: C- or better in MATH 2411
Additional Information: GT courses GT Pathways, GT-MA1, Mathematics; Denver Core Requirement, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2810 - Topics (1-3 Credits)
Topics in mathematics with various subtitles reflecting course content. Prereq: permission of instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MATH 2830 - Introductory Statistics (3 Credits)
Basic statistical concepts, summarizing data, probability concepts, distributions, confidence intervals, hypothesis testing. Note: This course assumes that students have knowledge equivalent to three years of high school mathematics (two years of algebra), intermediate algebra, or Algebraic Literacy at a Colorado Community College at the start of class. Students who have a grade of B- or better in one of these courses pass at a much higher rate. Term offered: fall, spring, summer. Requisite: In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 2831. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-MA1.
Grading Basis: Letter Grade
In order to promote student success, any student who has an ACT MATH score less than 19 (or equivalently an SAT MATH score less than 520) AND a H.S. GPA of less than 3.25 will be required to enroll in the one credit hour co-requisite workshop MATH 2831.
Additional Information: Denver Core Requirement, Mathematics; GT courses GT Pathways, GT-MA1, Mathematics.
Typically Offered: Fall, Spring, Summer.

MATH 2831 - Introductory Statistics Workshop (1 Credit)
Prepares students for college-level mathematics. Students receive one-on-one and small-group instruction on mathematics topics related to college level mathematics success. Coreq: MATH 2830. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Co-requisite: MATH 2830
Typically Offered: Fall, Spring.

MATH 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MATH 3000 - Introduction to Abstract Mathematics (3 Credits)
Students learn to prove and critique proofs of theorems by studying elementary topics in abstract mathematics, including logic, sets, functions, equivalence relations and elementary combinatorics. Coreq: MATH 2421 or MATH 3191. Note: This course assumes that students have taken MATH 2411 or equivalent. Students who have a grade of B- or better in MATH 2411 pass at a much higher rate. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 2421 or MATH 3191
Typically Offered: Fall, Spring, Summer.

MATH 3041 - Fundamental Mathematics: Algebra, Probability and Data Analysis (3 Credits)
This course is particularly pertinent to prospective elementary teachers, involving algebra, probability and data analysis from a modern approach. Its primary emphasis is asking and answering questions intelligently about our world through the use of algebra, probability, and data analysis. Explorations focus on representing, analyzing, generalizing, formalizing, and communicating patterns and the chances of future events. Mathematics content will be presented in a problem solving and exploratory context, using appropriate instructional tools. This course will not satisfy the requirements for a major in Mathematics. Prereq: MTED 3040 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MTED 3040 with a C- or higher.
Additional Information: Denver Core Requirement, Mathematics.

MATH 3191 - Applied Linear Algebra (3 Credits)
Linear algebra is the mathematics of vectors and matrices and is fundamental for the representation and manipulation of data. List of topics covered: Definition and use of vectors and matrices, Matrix algebra, Systems of linear equations, Reduced Row Echelon Form, Trace and determinant, Linear independence and span, Basis and dimension, Null space and range, Rank theorem, Vector spaces and linear transformations, Eigenvalues and Eigenvectors, Diagonalization, Inner products, Orthogonal projections, Gram-Schmidt algorithm, Diagonalization of symmetric matrices, Singular value decomposition. Applications such as computer graphics, machine learning, Markov chains, and data reduction are considered. Note: No co-credit with MATH 3195. Prereq: MATH 1401 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 with a C- or higher
Typically Offered: Fall, Spring, Summer.

MATH 3195 - Linear Algebra and Differential Equations (4 Credits)
Presents the essential ideas and methods of linear algebra and differential equations, emphasizing the connections between and the applications of both subjects. The course is designed for students in the sciences and engineering. This course will not satisfy the requirements for a major in Mathematics. Note: No co-credit with MATH 3200 and MATH 3191. Prereq: MATH 2411 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 2411
Typically Offered: Fall, Spring, Summer.

MATH 3200 - Elementary Differential Equations (3 Credits)
First and second order differential equations, Laplace transforms, systems of equations, with an emphasis on modeling and applications. Note: No co-credit with MATH 3195. Prereq: MATH 2411 with a C- or higher. Coreq: MATH 3191. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 2411 with a C- or higher, Co-requisite MATH 3191.
Typically Offered: Fall, Spring, Summer.

MATH 3210 - Higher Geometry I (3 Credits)
Studies the foundations of modern geometry by examining axiomatic systems for various geometrics, with an emphasis on non-Euclidean hyperbolic geometry. Prereq: C- or better in MATH 3000. Cross-listed with MCKE 5210. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: C- or better in MATH 3000

MATH 3301 - Introduction to Optimization (3 Credits)
Introduces a mathematical approach for decision-making in practice based on optimization. Students will learn to model, analyze and solve a variety of problems from deterministic operations using both continuous and discrete mathematical programming algorithms and software. Note: this course assumes that students have taken MATH 3191 or MATH 3195 or equivalent. Students who have received a grade of B- or better in MATH 3191 or 3195 pass this course at a much higher rate. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

MATH 3302 - Simulation in Operations Research (3 Credits)
Elementary stochastic processes and standard nondeterministic operations research models solved by simulation: Markov chains, Poisson process, Monte Carlo and discrete-event simulation, queuing theory, and inventory models. Note: This course assumes that students have programming experience (e.g. MATLAB), and have taken MATH 3191 and MATH 3800 or 4810 or equivalent. Students who have a grade of B- or better in MATH 3191 and MATH 3800 or 4810 pass this course at a much higher rate. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 3376 - Data Wrangling & Visualization (3 Credits)
The course provides an introduction to obtaining, restructuring, and visualizing complex data sets. Students will learn to manipulate many data types, store data in a variety of structures, and construct static and dynamic plots in a variety of contexts. Students earning a B- or better in Math 1376 or 4387 are more likely to be successful in this course than students earning lower grades. Prereq: MATH 1376 or MATH 4387 or CSCI 1410/1411 with a C- or higher and MATH 2830 or MATH 3382 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1376 or MATH 4387 or CSCI 1410/1411 with a C- or higher and MATH 2830 or MATH 3382 with a C- or higher

MATH 3382 - Statistical Theory (3 Credits)
Probability, random variables, properties of distributions, bootstrap methods, maximum likelihood and method of moments estimation, properties of estimators, classical methods for confidence intervals and hypothesis testing. Prereq: MATH 2421 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 with a C- or higher.
Typically Offered: Fall, Spring.

MATH 3440 - Introduction to Symbolic Logic (3 Credits)
Covers truth functional and quantificational logic through polyadic first order predicate calculus and theory of identity. Attention is given to such problems in metatheory as proofs of the completeness and consistency of systems of logic. Cross-listed with PHIL 3440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 3511 - Mathematics of Chemistry (4 Credits)
Multivariate functions, probability and statistics for chemistry, matrices and vectors, mathematics of reaction kinetics and symmetry point groups. Course covers mathematics needed for CHEM 4511 and 4521. This course will not satisfy the requirements for a major in Mathematics. Prereq: MATH 2411, CHEM 2031 or CHEM 2081, CHEM 2061 or CHEM 2091. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411, CHEM 2031 or CHEM 2081, CHEM 2061 or CHEM 2091
Typically Offered: Fall.

MATH 3800 - Probability and Statistics for Engineers (3 Credits)
Basic probability theory, discrete and continuous random variables, point and interval estimation, test of hypotheses, and simple linear regression. Note: no co-credit with MATH 4810. This course will not satisfy the requirement for a major in Mathematics. Note: This course assumes that students have taken MATH 2411 and have either previously taken MATH 2421 or are taking MATH 2421 the same semester as MATH 3800. Students who have a grade of B- or better in MATH 2411 pass this course at a much higher rate. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MATH 3810 - Introduction to Probability (3 Credits)
Fundamentals of probability theory with connection to practical application through simulation. Topics include: Axioms of probability, conditional probability, independence, law of total probability, Bayes theorem, random variables, probability distributions, expected value and variance. Important distributions such as binomial, normal, exponential, and Poisson distributions. Joint and conditional distributions, conditional expectation and variance, functions of random variables. Laws of large numbers (weak and strong), Central Limit Theorem. An emphasis will be placed on using simulation to solve problems. Note: No co-credit with MATH 3800. Coreq: MATH 2421. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 2421.
Typically Offered: Fall, Spring.

MATH 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

MATH 4010 - History of Mathematics (3 Credits)
A history of the development of mathematical techniques and ideas from early civilization to the present, including the inter-relationships of mathematics and sciences. Prereq: MATH 2411 with a C- or higher. Coreq: MATH 3000 or 3191. Cross-listed with MATH 5010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2411 with a C- or higher Coreq: MATH 3000 or 3191
Typically Offered: Spring.

MATH 4015 - Capstone Course for Secondary Teachers (3 Credits)
High school mathematics from an advanced perspective: analyses of alternative definitions, extensions and generalizations of familiar theorems; discussions of historical contexts in which concepts arose; applications of mathematics. This course will only satisfy the requirements for the Mathematics Education option of the major in Mathematics. Note: this course assumes that students have taken MATH 3210, 4310 and 3140 or equivalent. Cross-listed with MATH 5015. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4027 - Topics in Mathematics (3 Credits)
Special topics in mathematics will be covered; consult 'Schedule Planner' for current topics and prerequisites. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MATH 4110 - Theory of Numbers (3 Credits)
Every other year. Topics include divisibility, prime numbers, congruencies, number theoretic functions, quadratic reciprocity, and special diophantine equations, with applications in engineering. Prereq: Grade of C- or better in MATH 3000. Note: Students who have a grade of B- or better in MATH 3000 pass this course at a much higher rate. Cross-listed with MATH 5110. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 3000
Typically Offered: Spring.

MATH 4140 - Introduction to Modern Algebra (3 Credits)
Studies the fundamental algebraic structures used in modern mathematics. Topics include groups, rings, fields and polynomials. Note: This course assumes that students have taken MATH 3000 or equivalent and either MATH 3191 or MATH 3195. Students who have a grade of B- or better in these courses pass at a much higher rate. Cross-listed with MCKE 5140. Prereq: MATH 3000 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3000 with a C- or higher.
Typically Offered: Spring.

MATH 4310 - Introduction to Real Analysis I (3 Credits)
Calculus of one variable, the real number system, continuity, differentiation, integration theory, sequence and series. Prereq: Grade of C- or better in MATH 2421 and 3000. Note: Students who have a grade of B- or better in MATH 2421 and 3000 pass this course at a much higher rate. Cross-listed with MCKE 5310. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- (1.7) or better in MATH 2421 and 3000
Typically Offered: Fall.

MATH 4320 - Introduction to Real Analysis II (3 Credits)
Convergence, uniform convergence; Taylor's theorem; calculus of several variables including continuity, differentiation and integration; Picard's theorem in ordinary differential equations and Fourier series. Prereq: MATH 4310 with a C- or higher. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 4310 with a C- or higher.
Typically Offered: Spring.

MATH 4337 - Intro to Statistical and Machine Learning (3 Credits)
This is an applied, hands-on course in statistical and machine learning. This course will introduce students to the general framework, best practices, model training, and assessment for machine learning methods from the viewpoint of statistics. Both supervised and unsupervised methods are covered including penalized regression, knearest neighbors, clustering, and neural networks. Additional machine learning topics such as random forests and support vector machines are included as time permits. Ultimately, students will learn how and why to use a particular method, how to validate and explain the results, and apply the methods to real data. Note: It is recommended that students are comfortable learning a statistical computing language such as R or Python as these will be taught alongside the course material. Students with minimal programming experience should expect to spend more time learning the programming language throughout the course. Prereq: MATH 4387 or MATH 5387 or MATH 4830 or MATH 5830 or BIOL 3763 with a C- or higher. Students who have completed a different statistics course that contains regression and computing may seek instructor permission to enroll. Cross-listed with MATH 5337. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 4387 or MATH 5387or MATH 4830 or MATH 5830 or BIOL 3763 with a C- or higher.

MATH 4387 - Applied Regression Analysis (3 Credits)
Topics include simple and multiple linear regression, model diagnostics and remediation, and model selection. Emphasis is on practical aspects and applications of linear models to the analysis of data in business, engineering and behavioral, biological and physical sciences. Prereq: Grade of C- (1.7) or better in MATH 3191 and in MATH 3800 or 4820 or 3382. Note: Students who have a grade of B- or better in MATH 3191, an A in MATH 3800 or a B- or better in MATH 4820 pass this course at a much higher rate. Cross-listed with MATH 5387. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- (1.7) or better in MATH 3191 and in MATH 3800 or 4820 or 3382
Typically Offered: Fall.

MATH 4388 - Machine Learning Methods (3 Credits)
Regression, neural networks, clustering, support vector machines, random forests, and other prediction/classification techniques will be used to solve supervised and unsupervised learning problems. This course will connect each topic with the underlying mathematical foundation such as optimization methods and statistical inference. A key focus is deriving the methods and their properties to guide proper application. Students will learn how to apply methods using standard libraries from Python, R, or Matlab. Prereq: MATH 1376 or MATH 3250 and MATH 3382 or MATH 3800 and MATH 3191 or MATH 3195, all with a C- or higher. Cross-listed with MATH 5388. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1376 or MATH 3250 and MATH 3382 or MATH 3800 and MATH 3191 or MATH 3195, all with a C- or higher.

MATH 4390 - Game Theory (3 Credits)
Zero-sum and non-zero-sum games; Nash equilibrium and the principle of indifference; Shapley value and other concepts of fair division; Evolutionary game theory, ESS, and evolutionary population dynamics. Applications in economics, business, and biology. Note: This course assumes that students have programming experience (e.g. MATLAB), and have taken MATH 2421, 3191 and 3200 or MATH 3195, MATH 3800 or 4810, or equivalent. Students who have a grade of B- or better in these courses pass this course at a much higher rate. Cross-listed with MATH 5390. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MATH 4394 - Experimental Designs (3 Credits)
Designs covered will include: completely randomized, complete block, split plot, incomplete block, factorial and fractional factorial designs. Additionally, power and study design for non-experimental studies will be covered. Prereq: Grade of C- or better in MATH 4387 or 5387. Cross-listed with MATH 5394. Term offered: spring of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 4387 or 5387
Typically Offered: Spring.

MATH 4408 - Applied Graph Theory (3 Credits)
Introduces discrete structures and applications of graph theory to computer science, engineering, operations research, social science, and biology. Topics include connectivity, coloring, trees, Euler and Hamiltonian paths and circuits, matching and covering problems, shortest route and network flows. Prereq: MATH 2511 or CSCI 2511 or MATH 3000 with a C- or higher. Note: This course assumes that students have taken MATH/CSCI 2511 or MATH 3000. Students who have a grade of B- or better in MATH/CSCI 2511 or MATH 3000 pass this course at a much higher rateCross-listed with CSCI 4408 and MCKE 5408. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2511 or CSCI 2511 or MATH 3000 with a C- or higher.
Typically Offered: Spring.

MATH 4409 - Applied Combinatorics (3 Credits)
Every other year. Major emphasis is on applied combinatorics and combinatorial algorithms, with applications in computer science and operations. Topics include general counting methods, generating functions, recurrence relations, inclusion-exclusion, and block designs. Prereq: MATH 3000 with a C- or higher. Note: This course assumes that students have taken MATH 3000. Students who have a grade of B- or better in MATH 3000 pass this course at a much higher rate. Cross-listed with MCKE 5409. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 3000 with a C- or higher.
Typically Offered: Fall.

MATH 4450 - Complex Variables (3 Credits)
Infrequent. Topics include complex algebra, Cauchy-Riemann equations, Laurent expansions, theory of residues, complex integration, and introduction to conformal mapping. Note: This course assumes that students have taken MATH 2421 and MATH 3000. Students who have a grade of B- or better in MATH 2421 and MATH 3000 pass this course at a much higher rate. Term offered: spring of even years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 4650 - Numerical Analysis I (3 Credits)
A first semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Rounding errors and numerical stability of algorithms; solution of linear and nonlinear equations; data modeling with interpolation and least-squares; and optimization methods. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CSCI 1410). Prereq: MATH 3191 or MATH 3195 with a C- or higher. Cross-listed with CSCI 4650, 5660, and MATH 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 or MATH 3195 with a C- or higher.
Typically Offered: Fall, Spring.

MATH 4660 - Numerical Analysis II (3 Credits)
A second semester course in numerical methods and analysis fundamental to many algorithms encountered in scientific computing, data science, machine learning, and computational models in science and engineering. Numerical differentiation and integration; random numbers and stochastic modeling; Fast Fourier Transform; data compression; eigenvalues and singular value decompositions with application to regression and dimension reduction. This course assumes that students have the equivalent of differential and integral calculus (e.g., MATH 2411), linear algebra (e.g., MATH 3191 or 3195), and computer programming (e.g., MATH 1376 or CS 1410). Prereq: MATH 3191 and MATH 3200 with a C- or higher or MATH 3195 with a C- or higher. Cross-listed with MATH 5661, CSCI 4660 and 5661. Term offered: spring of odd years. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3191 and MATH 3200 with a C- or higher or MATH 3195 with a C- or higher.
Typically Offered: Spring.

MATH 4733 - Partial Differential Equations (3 Credits)
Infrequent. Initial/Boundary value problems for first-order, wave, heat and Laplace Equations; maximum principles; Fourier Series and applications. Note: This course assumes that students have taken MATH 2421 and MATH 3200, and either have taken MATH 3000 or have experience with partial differential equations in engineering or physics. Students who have a grade of B- or better in MATH 2421 and MATH 3200 pass this course at a much higher rate. Cross-listed with MATH 5733. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

MATH 4779 - Math Clinic (3 Credits)
The clinic is intended to illustrate the applicability and utility of mathematical concepts. Research problems investigated originate from a variety of sources--industry, government agencies, educational institutions, or nonprofit organizations. Prereq: MATH 3191, either MATH 1376 or CSCI 1410/1411, and 6 additional credit hours in upper-division MATH courses, all with C- or higher. Cross-listed with MATH 5779. Term offered: fall, spring. Repeatable. Max Hours: 99 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 99.
Prereq: MATH 3191, either MATH 1376 or CSCI 1410/1411, and 6 additional credit hours in upper-division MATH courses, all with C- or higher.
Typically Offered: Fall, Spring.

MATH 4791 - Continuous Modeling (3 Credits)
Every other year. Surveys mathematical problems that arise in natural sciences and engineering. Topics may include population models, epidemic models, mechanics, heat transfer and diffusion, tomography, pharmaco-kinetics, traffic flow, fractal models, wave phenomena, and natural resource management. Most models discussed are based on differential and integral equations. Emphasis is formulation and validation of models as well as methods of solution. Note: This course assumes that students have taken MATH 3191 and MATH 3200. Students who have a grade of B- or better in MATH 3191 and MATH 3200 pass this course at a much higher rate. Cross-listed with MATH 5791. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4792 - Probabilistic Modeling (3 Credits)
Every other year. Markov chains; Poisson processes, continuous time Markov chains, elementary topics in queuing theory, and some mathematical aspects of Monte Carlo simulation, including random variate generation, variance reduction, and output analysis. Note: This course assumes that students have taken MATH 4810 or 5310 and have some programming experience. Students who have a grade of B- or better in MATH 4810 or 5310 pass this course at a much higher rate. Cross-listed with MATH 5792. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

MATH 4793 - Discrete Math Modeling (3 Credits)
Every other year. Focuses on the use of graph theory and combinatorics to solve problems in a wide variety of disciplines. Applications are selected from computer science, communication networks, economics, operations research, and the social, biological and environmental sciences. Note: This course assumes that students have taken MATH 3191 and MATH 4408. Students who have a grade of B- or better in MATH 3191 and MATH 4408 pass this course at a much higher rate. Cross-listed with MATH 5793. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4794 - Optimization Modeling (3 Credits)
Every other year. Principles of model formulation and analysis are developed by presenting a wide variety of applications, both for natural phenomena and social systems. Examples of optimization models to represent natural phenomena include principles of least time and energy. Examples in social systems include resource allocation, environmental control and land management. Specific applications vary, but are chosen to cover a wide scope that considers dichotomies, such as discrete vs. continuous, static vs. dynamic, and deterministic vs. stochastic. Some computer modeling language (like GAMS) is taught. Note: This course assumes that students have taken MATH 2421 and MATH 3191. Students who have a grade of B- or better in MATH 2421 and MATH 3191 pass this course at a much higher rate. Cross-listed with MATH 5794. Max hours: 3 Credits.
Grading Basis: Letter Grade

MATH 4820 - Introduction to Mathematical Statistics (3 Credits)
Sampling distributions, maximum likelihood and method of moments estimation, properties of estimators, classical methods for confidence intervals and hypothesis testing, simple linear regression. Prereq: Grade of C- or better in MATH 3800 or MATH 4810 (preferred). Note: Students who have a grade of A in MATH 3800 or a B- or better in MATH 4810 pass this course at a much higher rate. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Grade of C- or better in MATH 3800 or MATH 4810
Typically Offered: Spring.

MATH 4830 - Applied Statistics (3 Credits)
Review of estimation, confidence intervals and hypothesis testing; Anova; categorical data analysis; non-parametric tests; linear and logistic regression. No co-credit with MATH 4387 or 5387. This course will not satisfy the requirements for a major in Mathematics. Cross-listed with MATH 5830. Prereq: MATH 2830 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2830 with a C- or higher.
Typically Offered: Spring.

MATH 4840 - Independent Study (1-3 Credits)
Variable credit depending on the student's needs. Offered for the advanced student who desires to pursue a specific topic in considerable depth. Note: Supervision by a full-time faculty member is necessary, and the dean's office must concur. Students may register for this course more than once with departmental approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MATH 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Maximizing Access to Research Careers (MARC)

MARC 2880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MARC 2990 - Special Topics (1-6 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit under unique course topics. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MARC 3880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MARC 3990 - Special Topics (1-6 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit under unique course topics. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MARC 4090 - Research Design & Development (3 Credits)
This advanced writing and research methods course is designed to help students develop independent research ideas into formal products, such as a thesis proposal, grant application, presentation, and study protocols. Prereq: permission of the instructor. Cross-listed with PSYC 4090. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MARC 4680 - Behavioral & Biomedical Sciences Research Seminar (1-2 Credits)
Introduces research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: permission of the instructor. Cross-listed with PSYC 4680. Repeatable. Term offered: fall, spring. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

MARC 4681 - Behavioral & Biomedical Sciences Research Seminar II (1-2 Credits)
Continuation of research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: PSYC/MARC 4680 and permission of the instructor. Cross-listed with PSYC 4681. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PSYC 4680 or MARC 4680 and instructor permission.

MARC 4780 - Behavioral & Biomedical Sciences Research: Ethics & Issues (3 Credits)
Students will critically review and analyze some of the major ethical and policy issues that arise during the conduct of basic and applied behavioral research. Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher or instructor permission. Cross-listed with MARC 5780. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, 1005, 2090, 2220, and 3090 with a C- or higher.
Typically Offered: Fall.

MARC 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MARC 4990 - Special Topics (1-6 Credits)
Advanced study of special topics to be selected by the instructor. Note: May be repeated for credit under unique course topics. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

Mechanical Engineering (MECH)

MECH 1025 - CAD and Graphics for Mechanical Engineering (3 Credits)
Introduction to 3-D computer-aided design software, solid modeling, industry-standard engineering drawing practices, and engineering graphics. Applications to mechanical engineering. Prereq: High School Geometry and Algebra. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 1045 - Manufacturing Processes Design (3 Credits)
Basic manufacturing background will be provided to engineering students in order to: (1) apply manufacturing specifications to the design of mechanical devices, and (2) communicate with technical personnel in a production environment. Topics cover metal casting, bulk and sheet metal forming, material removal and joining and fastening processes. Prereq: MECH 1025 or CVEN 1025 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 1025 or CVEN 1025 with a C- or higher

MECH 1100 - Fundamentals of Computational Innovation (3 Credits)
Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with ENGR 1100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MECH 1200 - Fundamentals of Engineering Design Innovation (3 Credits)
This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, ENGR 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

MECH 1208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 2023 - Statics (3 Credits)
A vector treatment of force systems and their resultants; equilibrium of trusses, beams, frames, and machines, including internal forces and three-dimensional configurations, static friction, properties of areas, distributed loads and hydrostatics. Prereq: PHYS 2311 with a C- or higher. Coreq: MATH 2411. Cross-listed with CVEN 2121. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2311 with a grade of C- or higher Coreq: MATH 2411

MECH 2024 - Introduction to Materials Science (3 Credits)
The development of the physical principles relating the structural features of materials to their observed properties. Prereq: ENGR 1130 or CHEM 1130 or (CHEM 2031 and CHEM 2038 and CHEM 1999AE). Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: ENGR 1130 or CHEM 1130 or (CHEM 2031 and CHEM 2038 and CHEM 1999AE) with a C- or higher.

MECH 2030 - Analysis Techniques in Mechanical Engineering (3 Credits)
Introduces experimental methods and mathematical analysis used in engineering. Spreadsheets are used to analyze engineering data and prepare tables and graphs. Introduction to computer programming using MATLAB. Prereq: MATH 1401 and MECH 1025 with a grade of C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 and MECH 1025 with a C- or higher

MECH 2033 - Dynamics (3 Credits)
A vector treatment of dynamics of particles and rigid bodies, including rectilinear translation, central-force, and general motion of particles, kinematics of rigid bodies, the inertia tensor, plane motion of rigid bodies, energy and momentum methods for particles, systems of particles, and rigid bodies. Prereq: MECH 2023 or CVEN 2121 with a C- or higher. Cross-listed with CVEN 3111. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

MECH 2034 - Properties of Engineering Materials (1 Credit)
Experiments to determine material properties and the effect of processing on properties important in mechanical design. Materials include metal, polymers, and composites. Loadings include tension, compression, and bending under static, dynamic impact and creep states. Coreq: MECH 2024. Max hours: 1 Credits.
Grading Basis: Letter Grade
Coreq: MECH 2024

MECH 2208 - Special Topics: 2208-2298 (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 3010 - Elementary Numerical Methods and Programming (3 Credits)
A development of basic numerical methods used to solve engineering problems. Introduction to MATLAB to implement numerical simulations. Coreq: MATH 3195 (or MATH 3191 and MATH 3200). Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MATH 3195 (or MATH 3191 and MATH 3200). Restricted to majors in CEDC Mechanical Engineering.

MECH 3012 - Thermodynamics (3 Credits)
Introduces thermodynamic properties and state relationships, processes and cycles with work and heat transfer. Applications of the first and second laws to energy-related engineering systems. Prereq: MATH 1401 and PHYS 2311 with a C- or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 1401 and PHYS 2311 with a C- or higher

MECH 3021 - Introduction to Fluid Mechanics (3 Credits)
Applies exact and approximate theories to engineering problems in fluids. Examples include potential flow theory, Euler's equations for inviscid fluids, Bernoulli's equations, Navier-Stokes equations, and pipe flow. Prereq: MECH 2033, MECH 3012 and MATH 2421 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033, MECH 3012 and MATH 2421 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3022 - Thermodynamics II (3 Credits)
Generalized thermodynamic cycles; general thermodynamic cycle considerations, compressor, expander, heat exchanger processes, refrigeration cycles, mixtures and combustion. Prereq: MECH 3012 or ENGR 3012 and MATH 2421 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: (MECH 3012 or ENGR 3012) AND MATH 2421 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 3027 - Measurements (3 Credits)
Principles of digital and analog measurements; systems for sensing, transporting, modifying, and outputting information; systematic and random error analysis. The laboratory includes a variety of instruments and components illustrating fundamental experimental measurement techniques and methods. Prereq: MECH 3030 or ELEC 3030, MATH 3195 or (MATH 3191 & MATH 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3030 or ELEC 3030, MATH 3195 or (MATH 3191 MATH 3200) with a C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3028 - Laboratory of Mechanical Measurements (1 Credit)
Modern techniques for Mechanical measurements. Laboratory includes techniques for the calibration of transducers and analysis of Statistical uncertainty. Data Acquisition Systems used for Signal acquisition and measurement of common mechanical quantities, such as displacement, velocity, acceleration and force. Design and characterization of a second order measurement system based on strain gages. Coreq: MECH 3027. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MECH 3027

MECH 3030 - Electric Circuits and Systems (3 Credits)
Basic electrical engineering concepts for non-majors. Basic study of circuit analysis (RLC and Op-amps), transformers and motor equations, and simple electronic circuits (diodes and transistors). Prereq: MATH 2421 and PHYS 2331 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with ELEC 3030. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 2421 and PHYS 2331 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3031 - Fluids/Thermal Laboratory (1 Credit)
Laboratory exercise in compressible and incompressible fluid flow; steady state and transient heat transfer. Prereq: MECH 3012 with a grade of C- or higher. Coreq: MECH 3021 and CVEN 3313. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 1 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3012 with a C- or higher Coreq: MECH 3021 or CVEN 3313 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3032 - Electric Circuits and Systems Lab (1 Credit)
Basic electrical engineering lab for MECH majors. Coreq: MECH 3030 or ELEC 3030. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 1 Credits.
Grading Basis: Letter Grade
Coreq: MECH 3030 or ELEC 3030 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3035 - Design of Mechanical Elements (3 Credits)
Review of mechanics of materials and stress analysis; detailed design of various machine elements such as fasteners, springs, brakes and gears. Includes design project. Prereq: MECH 2024 and MECH 3043 with a grade C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2024 and MECH 3043 with a grade C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 3042 - Heat Transfer (3 Credits)
Basic laws of heat transfer by conduction, convection, and radiation with engineering design applications. Includes design project. Prereq: MECH 3021 with a grade C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3021 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3043 - Strength of Materials (3 Credits)
Application of exact and approximate theories of stress and displacement to engineering problems in solids. Examples include torsion of rods and bending of beams. Combined stresses, principal stresses and energy methods are examined. Prereq: MECH 2023 or CVEN 2121 with a C- or higher. Cross-listed with CVEN 3121. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023 or CVEN 2121 with a C- or higher

MECH 3045 - Principles of Additive Manufacturing (3 Credits)
This course will introduce students to additive manufacturing (AM) techniques and design for additive manufacturing (DfAM). Additive manufacturing is no longer thought of as simply “rapid prototyping,” but is influencing the way manufacturing is performed at almost every level of the product lifecycle. It will influence practically every manufacturing system of the future. This course will cover the fundamentals, applications, and implications of AM such that students will understand why and when to use AM, as well as challenge their traditional thinking of design and what is possible. At the end of this course, students should be able to: (1) Describe the 7 processes of AM, and understand their advantages and limitations. (2) Have hands-on experience in using several different AM processes, including building, modifying, and repairing their own AM machine. (3) Understand the wide variety of AM applications beyond prototyping. This includes tooling, production, performance improvement, customization, art, and more. (4) Understand how AM can be used in a product’s lifecycle from beginning to end. (5) Use “generative design software” and "topology optimization" to unlock complex designs to be created with AM. (6) Assess the cost and value of AM processes. Prereq: MECH 1045 and MECH 2024 with a grade of C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 1045 and MECH 2024 with a grade of C- or higher.

MECH 3065 - Intermediate Dynamics (3 Credits)
An in-depth study of Newtonian dynamics with constraints. Mechanism synthesis using graphical and analytic techniques. Prereq: MECH 2033 or CVEN 3111 and MECH 3010 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033 or CVEN 3111 and MECH 3010 with a C- or higher
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3147 - Bioengineering (3 Credits)
Explores engineering principles that have application in biology, and principles discovered in biology which may have application in engineering. Some topics covered are: cell biology, molecular biology, viscoelasticity, physical theory of plant cell growth aerodynamics, fluid mechanics, biofluid dynamics and animal flight. Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 3208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3840 - Independent Study (1-3 Credits)
This category is intended for upper-division level special topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 3939 - Internship (1-3 Credits)
Undergraduate internship course for credit. Must be approved by department and handled subject to experiential learning office rules. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4020 - Biomechanics (3 Credits)
Static and dynamic biomechanical analysis, effects of mechanical loading on bone and cartilage, design considerations in orthopaedic devices, muscle function, biomechanics of human movement, cardiovascular biomechanics. Prereq: MECH 2023, 2033, MATH 3195 or 3200 with a C- or higher. Cross-listed with MECH 5020. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2023, 2033, MATH 3195 or 3200 Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing
Typically Offered: Summer.

MECH 4023 - System Dynamics II: Controls (3 Credits)
Introduces the Laplace Transformation. Control system analysis using root locus and frequency response methods. Basic compensation techniques are to be covered. Prereq: MECH 3023 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3023 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4024 - Mechanical Behavior of Materials (3 Credits)
Studies the response of materials to applied stresses. Emphasis is on the understanding of the relationships between structure and properties. Fracture mechanics and fatigue are introduced. Prereq: MECH 3024 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3024 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4025 - Advanced Biomechanics (3 Credits)
This course provides training in computational and experimental methods for biomechanical engineering analysis. Topics include finite element analysis of biological systems, orthopedic device design, medical imaging analysis, mechanical characterization of biological tissues, and biomechanics of human movement. Prereq: MECH 4020. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4020

MECH 4030 - Experimental and Computational Methods of Human Movement (3 Credits)
The objective of this course is to provide an overview of the various experimental and computational tools to measure and study human movement. Using a motion capture laboratory and musculoskeletal modeling, these tools will be used to develop a thorough understanding of how engineering principles can be used to address the major challenges of human movement biomechanics, with a primary emphasis on experimental measurement methods and simulations of movement. These tools will be used to explore the interaction of musculoskeletal properties, including whole#body and joint level biomechanics, with the environment during dynamic motion. Course topics include neuromuscular mechanics, balance performance, inverse dynamics, simulation of dynamic muscle#tendon mechanics, and musculoskeletal model development. Cross-listed with MECH 5030. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

MECH 4035 - Senior Design I (3 Credits)
Group and individual projects to design engineering components and systems. Design methodology, product specs, creativity, design reviews, communication, presentations, and report writing are emphasized. MECH 4035 and MECH 4045 form a one year sequence and must be taken consecutively. Prereq: MECH 3035 with a grade C- or higher and 40 hours of MECH courses. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade C- or higher and 40 hours of MECH courses. Restricted to majors in CEDC Mechanical Engineering.

MECH 4045 - Senior Design II (3 Credits)
Student teams manufacture and construct and/or redesign mechanical parts or assemblies that they designed in previous course (MECH 4035). A proposal, oral progress reports, and a final written report and demonstration are required. MECH 4035 and MECH 4045 form a one year sequence and must be taken consecutively. Prereq: MECH 4035 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4110 - Numerical Methods for Engineers (3 Credits)
Introduces numerical analysis. Solution of linear and nonlinear equation systems. Numerical methods for ordinary and partial differential equations. Engineering applications. Prereq: MATH 3195 or (3191 and 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4112 - Internal Combustion Engines (3 Credits)
Students obtain a sufficient understanding of internal combustion engines that will allow them to perform analysis of combustion thermodynamics and actual cycles, including heat addition, heat loss, air/fuel flow, and engine design and performance. Prereq: MECH 3012 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5112. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3012 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4114 - Designing with Composites (3 Credits)
Analysis and design of polymers and polymer-based composites. Failure criteria include static strength, stiffness, creep, fatigue, impact and fracture toughness. Design criteria include strength-to-weight ratio and cost-to-strength ratio. Prereq: MECH 3043 or CVEN 3121 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5114. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3043 or CVEN 3121 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4115 - Applied Plasticity and Creep (3 Credits)
Plastic deformation of materials applied to bulk and sheet metal manufacturing processes such as extrusion, rolling and sheet metal. Linear and nonlinear viscoelastic creep with applications to plates and shells. Prereq: MECH 3043 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5115. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3043 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4116 - Robotics (3 Credits)
Introduces kinematics, dynamics, and control of robot manipulators. Emphasis is placed on computer use in control of actual robots and in computer simulation of mathematical models of robots. Students must turn in a project report based on the computer simulation. Prereq: MECH 3065 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3065 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4120 - Methods of Engineering Analysis (3 Credits)
Selected topics from real analyses with applications to engineering analyses. Topics include vector calculus, ordinary differential equations, partial differential equations, and calculus of variations. Prereq: MATH 3195 or (MATH 3191 and MATH 3200) with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5120. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4132 - Power Plant Systems Design (3 Credits)
Detailed engineering analysis and design of a thermal power plant, including heat balance, selection of equipment (boiler, turbines, heat exchangers, pumps, cooling tower), performance evaluation, economic evaluation and feasibility studies. Prereq: MECH 3022 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3022 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4135 - Mechanical Systems Design (3 Credits)
Detailed engineering design of mechanical systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 3035 with a C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4136 - Control Systems Design (3 Credits)
Detailed engineering design of control systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 4023 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 4023 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4141 - Fluid Mechanics (3 Credits)
Viscous incompressible fluid flows. Topics include derivation of equations governing viscous compressible fluid motion; specializations to simple flows; boundary-layer theory; similarity solutions; introduction to turbulence and Reynolds stresses. Prereq: MECH 3021 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5141. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3021 with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4142 - Thermal Systems Design (3 Credits)
Detailed engineering design of thermal/fluids systems. Students work in teams on a project selected for entire class. Projects are similar to typical ones from industry. Course stresses creativity, synthesis, design judgment, and analysis of real-world problems. Oral and written presentations are required. Prereq: MECH 3010, MECH 3021, and MECH 3042 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3010, MECH 3021 and MECH 3042 with a grade of C- or higher. Restricted to majors in CEDC Mechanical Engineering.

MECH 4147 - Engineering Economy (3 Credits)
Applies economic and financial principles to evaluation of engineering alternatives. Calculation of annual costs, present worth, and prospective rates of return on investment. Review of systems analysis techniques, including simulation, linear programming, and project scheduling. Restriction: Restricted to MECH majors at the junior or higher level standing within the College of Engineering, Design and Computing. Cross-listed with CVEN 4077. Max Hours: 3 Credits. Semester Hours: 3 to 3
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors at the junior or higher level standing within the College of Engineering, Design and Computing

MECH 4155 - Air Conditioning Design (3 Credits)
Basic principles of heating and ventilating systems. Determination of heating and cooling loads. Design and layout of heating, ventilating, and air conditioning systems. Includes design project. Prereq: MECH 3022 and MECH 3042 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3022 and 3042 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4160 - Introduction to Operations Research (3 Credits)
Introduces operations research, including mathematical programming models, models for decision alternatives, for procurement and inventory, and for queuing operations. Prereq: MATH 3195 or (MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MATH 3195 OR (MATH 3191 and 3200) with a C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing.

MECH 4163 - Rigid-Body Dynamics (3 Credits)
Review of Newtonian dynamics, Lagrange's equations for particles, systems, and rigid bodies. Conservative and non-conservative systems, moments of inertia, principal axes, angular momentum and Euler equations. Illustrations from spinning bodies, including tops, gyro-compass and rotating machinery. Prereq: MECH 2033 or CVEN 3111, MATH 3195 or (MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5163. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 2033 or CVEN 3111 and (MATH 3195 or MATH 3191 and MATH 3200) with a grade of C- or higher. Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4166 - Computerized Numerical Control (CNC) Manufacturing (3 Credits)
Modern manufacturing engineering concepts using computerized numerical control (CNC). The students learn state-of-the-art CNC methodologies, including digitizing, drawing, generating codes, and manufacturing, using modern CNC machines. Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing. Cross-listed with MECH 5166. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 4175 - Finite Element Analysis in Machine Design (3 Credits)
Students learn basic theory of finite element analysis (FEA) as it applies to stress analysis and design of mechanical components. Commercial package will be used giving students practical experience in the use of FEA. Prereq: MECH 3035 with a grade of C- or higher. Restriction: Restricted to majors in CEDC Mechanical Engineering. Cross-listed with MECH 5175. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MECH 3035 with a grade of C- or higher Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4176 - Introduction to Sports Engineering (3 Credits)
Sports Engineering requires working both with the principles of biomechanics and the principles of engineering design and analysis. Using biomechanics is necessary in understanding the forces on the interface between the human athlete and his/her equipment. Recommended Prereq: MECH 2033, 3012 and 3021. Cross-listed with MECH 5176. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4177 - Energy Conversion (3 Credits)
This introductory Energy Conversion course introduces the basic background, terminology, and fundamentals of various forms of energy conversion. The topics covered will include: fuel cells, batteries, photovoltaic systems, solar thermal, and wind energy. Recommended Prereq: MECH 3012. Cross-listed with MECH 5177. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4178 - Solar Engineering (3 Credits)
This course provides the student with the basic ideas and calculation procedures on how solar processes work and how their performance can be predicted. Recommended Prereq: MECH 3012. Cross-listed with MECH 5178. Max Hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4179 - Introduction to Turbomachinery (3 Credits)
This introductory Turbomachinery course introduces the basic background, terminology, and fundamentals of various forms of turbomachines. The analysis of the various turbomachines will be focused on the performance of the tubomachine. Recommended Prereq: MECH 3012. Cross-listed with MECH 5179. Max hours: 3 Credits.
Grading Basis: Letter Grade

MECH 4195 - Solid Modeling (3 Credits)
This is a basic course in solid modeling using Solid Works computer software. Topics include feature-based modeling, parametric part design, parent/child relationships, use of datums, patterning, relations, sweeps, blends, assembly, tolerancing, rapid prototyping, CNC manufacturing, CMM inspection, and Step standards. Restriction: Restricted to major in CEDC Mechanical Engineering with junior standing. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MECH majors with junior standing within the College of Engineering, Design and Computing

MECH 4208 - Special Topics (1-3 Credits)
Subject matter to be selected from topics of current technological interest. Credit to be arranged. Cross-listed with MECH 5208. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 4228 - Special Topics (1-3 Credits)
Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MECH 4238 - Special Topics (1-3 Credits)
Restricted to majors in CEDC Mechanical Engineering. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

MECH 4840 - Independent Study (1-3 Credits)
This category is intended for upper division level special topics which students may wish to pursue on their own initiative, with guidance from a professor who agrees to limited consultation on the work and to award credit when the project is completed. Restriction: Restricted to majors in CEDC Mechanical Engineering. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade with IP
Repeatable. Max Credits: 9.
Restriction: Restricted to MECH majors within the College of Engineering, Design and Computing

Modern Languages (MLNG)

MLNG 1010 - Special Topics: Beginning Language I (1-5 Credits)
A basic introduction to a non-English language and culture. Students study pronunciation, vocabulary, grammar and simple writing techniques. Note: The topics for this course will target learning non-English languages and the languages taught will vary. Max hours:10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Typically Offered: Fall.

MLNG 1020 - Special Topics: Beginning Language II (1-5 Credits)
This course is a continuation of MLNG 1010. Further practice of pronunciation, study of vocabulary, grammar, and simple writing techniques. Note: The topics for this course will target learning non-English languages and the languages taught will vary. This course assumes that students have passed MLNG 1010 or equivalent, or have taken one year of high school language, or possess equivalent proficiency in the same target language. A grade of C- or higher in MLNG 1010 is recommended for success in this course. Max hours: 10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Typically Offered: Spring.

MLNG 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. Cross-listed with MLNG 5690, SPAN 4690, SPAN 5690, FREN 4690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

MLNG 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 5691, SPAN 4691, SPAN 5691, FREN 4691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

Music (MUSC)

MUSC 1011 - The Greatest Albums of All Time (3 Credits)
Explores the greatest recorded albums of the modern era. Students will gain historical perspective on specific groups and also learn about the tools and techniques used in their production process. For students who want to learn how to listen to music with greater understanding and appreciation. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 1111 - First-Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

MUSC 1540 - Introduction to Audio Production (3 Credits)
Operating principles and performance characteristics of microphones, amplifiers, speaker systems, equalizers, mixers and multi-track recorders; acoustics of music, auditoriums and recording studios. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 1541 - Audio Production I (3 Credits)
Operating principles and performance characteristics of microphones, amplifiers, speaker systems, equalizers, mixers and multi-track recorders; acoustics of music, auditoriums and recording studios. Coreq: MUSC 1542. Restriction: Restricted to MUSC-BS with a sub-plan of MRA or MST. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: MUSC 1542. Restriction: Restricted to MUSC-BS with a sub-plan of MRA or MST

MUSC 1542 - Audio Production Lab (1 Credit)
Lab component to Audio Production I. Focus is on digital audio workstation fluency including recording, editing, processing, signal flow, and automation, and multitrack mixing principles. Coreq: MUSC 1541. Restriction: Restricted to MUSC-BS majors withing the College of Arts and Media. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: MUSC 1541. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 1560 - Audio Production II (3 Credits)
Studies include theoretical and practical music production techniques with topics covering digital audio workstations, signal flow, digital signal processing, MIDI production, synthesis, and sampling. Team lab recording projects involve recording, mixing, and other music production techniques. Prereq: MUSC 1540 or MUSC 1541, and MUSC 1542. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1540 or MUSC 1541, and MUSC 1542. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 1800 - Acoustics for Audio Production (3 Credits)
This course studies the nature of sound and practical applications for critical listening and recording environments. Topics include the nature of sound, studio and concert hall design measurement and analysis. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2125 - Electronic Music Production Techniques (3 Credits)
Students will learn contemporary electronic music techniques using current software. The class will include MIDI sequencing, looping, sampling, FM synthesis, subtractive synthesis, and wavetable synthesis. Students will also learn how to appropriately use effects and digital editing. Prereq: MUSC 1560. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1560; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 2450 - Performing Arts Management and Presentation (3 Credits)
Introduces students to nonprofit and for-profit arts organization issues in performance presentation including organization structure, performance production and management, development of leadership and organizational skills as well as a general understanding of the profession. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2510 - Topics in Recording Arts (3 Credits)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

MUSC 2550 - Critical Listening for Recording Arts (3 Credits)
Students will be trained to recognize: boosts and cuts in different bands of frequencies at increasingly small increments, types of distortion, parameters for compression, delay, reverb and stereo imaging. Students will develop a vocabulary for describing sounds and improving auditory memory. Prereqs: MUSC 1560, 1800; Coreq: MUSC 2580; Restricted to BS-MUSC MRA or MST sub-plan only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereqs: MUSC 1560, 1800; Co-req: MUSC 2580; Restricted to BS-MUSC MRA or MST sub-plan only.

MUSC 2580 - Audio Production III (3 Credits)
Advanced studies in sound recording and reinforcement, aesthetics and techniques of multi-track digital recording and stereo imaging. Team lab recording projects. Prereq: MUSC 1560, MUSC 1800; Coreq: MUSC 2550; Restricted to BS-MUSC MRA and MST sub-plans only. Cross-listed with MSRA 5550. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 1560, MUSC 1800; Co-req: MUSC 2550; Restricted to BS-MUSC MRA and MST sub-plans only.

MUSC 2590 - Mastering & Advanced Digital Audio (3 Credits)
A study and practice of the art of mastering. Topics covered include: history, monitoring, signal flow, metering, jitter, audio restoration, limiting, creating a CD pre-master, & mastering for new media. Students will get practical experience mastering their own projects. Prereq: MUSC 2550 & 2580. Restriction: Restricted to MRA and MST sub-plan only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2550 2580; Restricted to MRA and MST sub-plan only.

MUSC 2600 - A History of Audio in 30 objects (3 Credits)
Explore the history of audio through the stories of 30 key objects. From Edison cylinders to Apple computers. This class will trace the development of recording technology and techniques, and discuss how they effect the way we work today. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2700 - Introduction to Music Business (3 Credits)
Introduces music as a business and a product, emphasizing music publishing, recording, broadcasting, marketing, licensing and legal aspects. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 2750 - Introduction to Music Business (3 Credits)
Introduces music as a business and product emphasizing music publishing, recording, broadcasting, marketing, licensing and legal aspects. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2815 - Music Industry Topics (3 Credits)
Various topics related to music business and recording arts industries. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

MUSC 2851 - Introduction to the International Music Business (3 Credits)
Students are introduced to the fundamentals of the international music business in diverse countries, including through online discussions and research. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2852 - Introduction to International Music Technology (3 Credits)
Historical and current global innovations in music technology and their impact on popular music. From magnetic tape to DAWs, monophonic to immersive audio, Roland's 808 bass to Ableton Live. Japan, Germany, Sweden, and the UK are among those represented. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2853 - International Music Business Study Abroad (3 Credits)
Students engage in music-business field trips to international settings to attend industry events, interact with industry professionals and conduct research for a practical perspective on the increasing globalization of the music industry. Max hours: 3 Credits.
Grading Basis: Letter Grade

MUSC 2854 - International Recording Arts Study Abroad (3 Credits)
Students become acquainted with music technology in a different country by visiting music conferences, recording studios, manufacturers, and historical landmarks. Students compare culturally-based standards and expectations of quality and communication to enhance their sense of professionalism in the field. Max hours: 3 Credits
Grading Basis: Letter Grade
Additional Information: Global Education Study Abroad.

MUSC 3125 - Sound and Music for Video Games (3 Credits)
This course will give students an overview of the function of sound and music for video games including: history, sound engines, types of audio utilized, stereo and surround sound localization, music capabilities of hardware configurations and future trends in sound for video games. Prereq: MUSC 2580. Max hours: 3 Credit.
Grading Basis: Letter Grade
Pre: MUSC 2580

MUSC 3130 - Sound and Music For Video Games II (3 Credits)
Course is a continuation of Sound and Music for Video Games. Topics of study include non-linear music composition and implementation, advanced sound design techniques, optimization, and hands-on experience with modern game engines and game audio engines. Prereq: MUSC 3125. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3125. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3210 - Music and Entertainment Marketing (3 Credits)
In this course students learn the essential elements of marketing as applied to the music and entertainment industry. Course topics include: marketing principles, theories and tools utilized in the music and entertainment businesses and specific industry practices and applications. Prereq: MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3220 - Artist Management (3 Credits)
Students learn the theory and practice of artist management as it relates to developing a career through entrepreneurship, establishing business structures for the artist, and concepts including: promotion, live performance, recording, contracts, and essential business practices. Prereq: MUSC 2700 Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3250 - Music and Entertainment Marketing (3 Credits)
Students learn the essential elements of marketing as applied to the music and entertainment industry. Course topics include: marketing principles, theories and tools utilized in the music and entertainment businesses and specific industry practices and applications. Restriction: Restricted to Music Industry Studies Minor MUIS-MIN. Prereq: MUSC 2750 or MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Industry Studies Minor MUIS-MIN. Prereq MUSC 2750 or MUSC 2700.

MUSC 3260 - Artist Management (3 Credits)
Students learn the theory and practice of artist management as it relates to developing a career through entrepreneurship, establishing business structures for the artist, and concepts including: promotion, live performance, recording, contracts, and essential business practices. Restriction: Restricted to Music Industry Studies Minor MUIS-MIN. Prereq: MUSC 2750 or MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Industry Studies Minor MUIS-MIN. Prereq MUSC 2750 or MUSC 2700.

MUSC 3265 - Music Industry Networking (3 Credits)
This course examines key networking strategies, processes and methods within the music industry. Students will research potential markets using social media, face-to-face interaction and other electronic means. Prereq: MUSC 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3220

MUSC 3505 - Introduction to Audio Post Production (3 Credits)
Reviews all aspects of audio synchronized with picture, including music, sound effects, narration, and dialog replacement. Topics studied with respect to film, video and multi-media. Cross-listed with MSRA 5505. Prereq: MUSC 2590 or FITV 2650 (Sound for Film and TV). Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590 or FITV 2650.

MUSC 3515 - History of 20th Century Film Music (3 Credits)
This survey of the history of 20th century music in film will acquaint aspiring filmmakers and musicians with a history of the music, as well as concepts of film theory and the creative use of film music. Restriction: Restricted to students with Junior or Senior status. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3530 - Live Sound Reinforcement (3 Credits)
This course focuses on the basic elements of sound reinforcement: acoustics, equalization, equipment and mixing techniques. The major emphasis is the production of the final sonic product. Prereq: MUSC 2580. Restriction: Restricted to Sophomore standing or higher and to MUSC-BS with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2580 Restriction: Restricted to Sophomore standing or higher. Restriction: Restricted to MUSC-BS with sub-plan of MRA or MST.

MUSC 3545 - Music Editing in Visual Media (3 Credits)
Music editing for film and television. Spotting notes, temp tracks, cue sheets, scoring session management, dubbing stage fixes, and Performing Rights Artists notes. Cross-listed with MSRA 5545. Prereq: MUSC 3505. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 3555 - Dialogue Editing & Mixing for Visual Media (3 Credits)
Dialogue editing and mixing for film and television. Recording Voiceover, Automated Dialogue Replacement, Group ADR, Efforts. Noise-reduction, mix levels, compression, limiting, EQ and use of reflected sound. Cross-listed with MSRA 5555. Prereq: MUSC 3505. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 3605 - Audio Post Production II (3 Credits)
Students will learn advanced Pro Tools techniques by designing, conceptualizing, and completing sound for a student film project. This interdisciplinary course prepares students for working relationships between Recording Arts, Film and Video areas and an entry level job in post production. Prereq: MUSC 3505. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5605. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3615 - Topics In Music Business (3 Credits)
Various topics relating to the study of music business. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

MUSC 3650 - Music Touring (3 Credits)
Study of the important elements related to the successful execution of musical tours. Topics include tour management, deal memos and contracts, advancing a tour, tour routing, management/booking agents, merchandise sales, tour accounting, hand tour marketing. Prereq: MUSC 3210 and MUSC 3220. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and MUSC 3220. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3690 - Concert Promotion and Venue Management (3 Credits)
This course gives students a working knowledge of touring, presenting, promoting, marketing and management of live concerts. They will undertake an in-depth analysis from various points of reference: issues for agent, independent promoter, venue manager, tour/production manager and performer. Prereq: MUSC 3210 and MUSC 3220. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and MUSC 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3699 - Concert Promotion and Venue Management (3 Credits)
This course gives students a working knowledge of touring, presenting, promoting, marketing and management of live concerts. They will undertake an in-depth analysis from various points of reference: issues for agent, independent promoter, venue manager, tour/production manager and performer. Restriction: Restricted to Music Business Minors. Prereq: MUSC 3250 and MUSC 3260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Business Minors. Prereqs: MUSC 3250 and MUSC 3260.

MUSC 3700 - Music and Entertainment Business in the Digital Age (3 Credits)
In this course students learn the trends and developments changing the industry in the Digital Age. Course focuses on current technology, terminology and business models shaping the industry, preparing students for entry into an evolving music and entertainment career. Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3710 - CAM Records (3 Credits)
Provides students with an opportunity to use knowledge and skills from music business courses to create and execute initiatives while partnering with local artists and music-related entities for a hands-on learning experience that benefits the student and local music community. Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3715 - Music Business Modules (1 Credit)
Modular courses intended to expose students to specific business and management aspects of various subindustries within the music industry.. Prereq: MUSC 3690. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

MUSC 3720 - Law and the Music Industry (3 Credits)
Students will learn how to use and analyze music law principles through a review of essential court case studies. Students will be tested on lecture material and provided with an opportunity to complete research papers for a more in-depth examination. Prereq: MUSC 3700, 3710 and 3755. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3700, 3710 and 3755. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3730 - Introduction to Music Cities (3 Credits)
In this course, students will examine the development and enhancement of music communities, using as templates the music communities in the city of Denver, the state of Colorado, and other cities throughout the world. Restriction: Restricted to Students with a Junior or Senior Standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3731 - Non Profit Entities in Music and Creative Economies (3 Credits)
Students explore the viability, creation, effective operation, and sustainability of a music-related non-profit entity within a music community and how it can strengthen the economic and social well-being of that community. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3732 - Advanced Music Cities (3 Credits)
Students explore how investment in a city's music economy can be beneficial to the development of both a city's physical and economic landscape. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3733 - Music Tourism (3 Credits)
Students will learn how to use music to drive local and regional tourism strategies. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 3740 - Location Sound Recording (3 Credits)
Studies workflow and techniques for location recording for film, video, TV, and video games. Students will work in field and in the studio recording and producing sound effects. Topics include microphone selection, field recording, editing and related industry studies. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 3750 - Women in the Music Industry (3 Credits)
An exploration of the role of women in the music industry, from performers to recording professionals, managers, and executives. This course offers historical perspective on gender diversity in the industry, and explores current issues and its impact on music. Prereq: MUSC 2700. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2700.

MUSC 3755 - Music Publishing (3 Credits)
Students will learn key issues related to music publishing and song marketing activities, as well as the function and responsibilities of music publishers. Students will gain insight into skills needed to operate a music publishing company. Prereq: MUSC 3210 and 3220. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3210 and 3220 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3760 - Music Publishing (3 Credits)
Students will learn key issues related to music publishing and song marketing activities, as well as the function and responsibilities of music publishers. Students will gain insight into skills needed to operate a music publishing company. Restriction: Restricted to Music Business Minors. Prereq: MUSC 3250 and MUSC 3260. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to Music Business Minors. Prereqs: MUSC 3250 and MUSC 3260.

MUSC 3770 - Music Licensing (3 Credits)
An examination of licensing and publishing agreements associated with the music industry. Course will also examine digital licensing agreements from a publishing and label perspective. Prereq: MUSC 3720 and MUSC 3755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: MUSC 3720 and MUSC 3755.

MUSC 3775 - Music Supervision and Synch (3 Credits)
An examination of processes and strategies associated with securing licenses for music in media outside the music industry. This course offers hands-on opportunity to make music selections for a variety of media using licensing/contract deals for composers, publishers, and labels. Prereq: Either MUSC 2700/2750 OR FITV 1001. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MSUC 2700 and MUSC 2750 OR FITV 1001.
Typically Offered: Fall, Spring.

MUSC 3785 - Current Issues In the Music Business (3 Credits)
Class discusses and analyzes cutting-edge business and legal developments in the music industry, focusing particularly on the developments' impact on historical traditions, career paths and creative applications in the field. Prereq: MUSC 3690. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 3690 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 3790 - Video Production in the Arts: Music (4 Credits)
Introduces the development of the contemporary music video with an emphasis on stylistic and technical analysis. Combines a lecture demonstration format with hands-on videography. Open to music, theatre, fine arts majors, and students who have successfully completed at least one College of Arts and Media course. Max hours: 4 Credits.
Grading Basis: Letter Grade

MUSC 3845 - The Beatles (3 Credits)
This course explores the music, biography, cultural impact and business of the Beatles. Restriction: Students must be of sophomore-, junior-, or senior-level standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 3850 - History of the Music Industry (3 Credits)
This course investigates the historical development of the music industry from an economic, social, artistic, political, and technological perspective. It focuses on organizations, genres, business systems and influential individuals. Restriction: Restricted to MUSC-BS majors within the College of Arts & Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

MUSC 4100 - Advanced Composition (2 Credits)
Composition of extended forms. May be repeated once for credit. Prereq: MUSC 3200. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

MUSC 4210 - Advanced Music Law (3 Credits)
Students will conduct in-depth research on focused music law issues, and engage in a workshop setting in drafting, reviewing and negotiating music business contracts. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MUSC 3720

MUSC 4360 - Music, Meditation and Technology (3 Credits)
Interdisciplinary course on acoustic ecology, sound art, and music technology. Through deep listening, compassionate listening, soundwalking, and interactive music controlled by motion capture, the unifying theme of this course is an engagement with sonic awareness, environment, and self-exploration. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5360. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST within the College of Arts and Media
Typically Offered: Fall.

MUSC 4380 - Advanced Electronic Music Production & Performance (3 Credits)
This course is designed to take a deeper dive into music, electronic music, as well as perceptions of music. Students will be able to create generative compositions, single sample- based compositions, a performative electronic composition, and incorporate multimedia elements into their compositions. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4400 - The International Music Business (3 Credits)
Students examine key elements of the music business structures of different countries, including the countries' trade organizations, industry executives, music artists (as examples of music business success), intellectual property principles and current music business issues. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MUSC 3720

MUSC 4500 - Topics in Professional Audio (1 Credit)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Prereq: MUSC 4550. Cross-listed with MSRA 5500. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: MUSC 4550 Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4510 - Topics in Recording Arts (3 Credits)
Selected topical subjects to include live or studio sound recording, sound reinforcement, new technologies or practices in the audio industry. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: MUSC 4550 Restriction: Restricted to MUSC majors with a sub-plan of MRA or MST
Typically Offered: Fall, Spring, Summer.

MUSC 4525 - Multimodal Interaction for Music (3 Credits)
This course explores human-computer interaction in music composition and performance. Students will learn to program and use open-source hardware to build novel and creative musical interfaces and instruments. Restriction: Restricted to Junior/Senior level students in the Recording Arts program. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Junior/Senior level students in the Recording Arts program (MUSC-BS MST or MUSC-BS MRA)

MUSC 4535 - Sound Effects & Foley for Visual Media (3 Credits)
Techniques for recording sound effects in the field and recording Foley in the studio. Use of library effects. Use of mixing techniques and plug-ins to create more complex sounds. Cross-listed with MSRA 5535. Prereq: MUSC 3505. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3505

MUSC 4545 - Re-recording Mixing for Visual Media (3 Credits)
Techniques for mixing dialogue, ADR, music, sound effects, background ambiences and Foley. Different level standards and deliverables. Cross-listed with MSRA 5565. Prereq: MUSC 3555 or MUSC 4535. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3555 or MUSC 4535

MUSC 4575 - Surround Sound (3 Credits)
This lecture-lab course deals with surround sound in film, digital TV and DVDs. Topics include monitoring, microphone techniques, recording, mixing, mastering, delivery formats and psychoacoustics. Students work on two lab projects in the semester. Prereq: MUSC 2590. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Cross-listed with MSRA 5575. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 2590; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4580 - Audio Production Seminar (3 Credits)
Faculty and majors of the music engineering program assemble to discuss and demonstrate issues of artistic and technical applications of recording technology. Student projects, faculty, and guest lectures provide topical focus. (Music facility fee applies) Prereq: MUSC 3505. Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: MUSC 3505; Restricted to MUSC-BS majors with a sub-plan of MRA or MST.

MUSC 4581 - Audio Production Seminar II (3 Credits)
A capstone project based course in which students complete professional quality projects in music production and/or post production. Students refine their engineering skills and develop new skills required for integration in the music industry such as portfolio design and resume development. Prereq: MUSC 4580. Cross-listed with MSRA 5581. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: MUSC 4580 Restrction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST

MUSC 4740 - Music Business Analysis (3 Credits)
Students learn to analyze specific managerial situations unique to the music and entertainment industries and will understand aspects of finance, taxation, and management science. Prereq: MUSC 3690, 3700, 3710 and 3755. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3690, 3700, 3710 and 3755 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 4800 - Music Industry Entrepreneurship (3 Credits)
MIE is a project-based course focused on individual entrepreneurial endeavors. Students will supply their own business, music, multi-media or audio projects. The class will focus on principles of entrepreneurship and helping student's develop those projects into viable businesses or creative releases. Restriction: Restricted to Juniors and Seniors. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

MUSC 4820 - Digital Music Techniques (3 Credits)
Studies the general principles and applications of digital music technology, emphasizing the function and operation of specific computer software. Topics include digital audio workstations, MIDI sequencers, digital signal processing programs, and distribution on optical discs and computer-based mediums. Prereq: Admittance to Recording Arts/Tech focus. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MRA or MST

MUSC 4890 - Music Business Senior Seminar (3 Credits)
Seminar activities focus on students developing, discussing and completing individual capstone projects. This includes an in-depth research paper and in-class presentation to allow students to explore their relevant interests in the music business. Prereq: MUSC 3720. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MUSC 3720 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

MUSC 4939 - Internship in MEIS (1-3 Credits)
Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Performance Music (PMUS)

PMUS 1001 - Music Appreciation (3 Credits)
Explores the style of music in the major compositional periods, including contemporary pop styles. This course will not satisfy any degree requirements for music majors. For non-music majors who want to learn how to listen to music with greater understanding and pleasure. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts; GT courses GT Pathways, GT-AH1, Arts Hum: Arts Expression.

PMUS 1011 - World Pop (3 Credits)
Explores popular music from around the world with an emphasis on the latest trends. This is for non-music majors who want to learn about other cultures and learn how to listen to all music with greater understanding. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Arts.

PMUS 1020 - Beginning Musicianship (3 Credits)
Provides basic musical and theoretical skills to students who do not have the proficiency to enroll in Theory I and Ear Training I. Major concepts include an introduction to music fundamentals, basic ear training, introduction to sight singing and an applied understanding of the keyboard. This course will not satisfy any degree requirements for Music majors. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 1021 - Piano Class For Non-Majors (1 Credit)
Elementary group instruction in piano skills for non-majors. Course focuses upon development of basic reading and performance skills for the non-Music Major. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1022 - Piano Class II for Non-Majors (1 Credit)
Intermediate to Advanced instruction in piano skills for non-majors. Course focuses on further development of reading and performance skills for the non-Music Major. Prereq: PMUS 1021 or permission of instructor. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1021

PMUS 1023 - Piano Class I (1 Credit)
This course focuses on beginning note reading in both treble and bass clefs, learning one octave major key scales, basic harmonization, and beginning improvisation. Students perform in both individual and group settings. Restriction: Restricted to MUSC-BS majors within the College of Arts & Media. For sub-plans MMM, MRA, MPF, SWR : Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B. For sub-plans MSB and MST: no coreqs. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts Media. For sub-plans MMM, MRA, MPF, SWR : Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B. For sub-plans MSB and MST: no coreqs.

PMUS 1024 - Piano Class II (1 Credit)
This course focuses on intermediate sight reading, technique, chord vocabulary, major and minor scales, and improvisation. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Prereq: PMUS 1023. Coreq: PMUS 1200 and 1210 for Audition Track students only; no corequisites required for Non-audition Track students. Max hours: 1 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1023 and Coreq: PMUS 1200 and 1210 for Audition Track students only; no corequisites required for Non-audition Track students.

PMUS 1025 - Piano Class III (1 Credit)
Students entering this course are expected to have general fluency in major and minor scales. The course focuses on expanding chord vocabulary, sight reading, transposition, and performing more advanced repertoire. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Prereq: PMUS 1024. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1024 (sub-plans MMM or MRA or MPF or PRA or MST or MSB or PMT or SWR) Coreq: PMUS 2100 and PMUS 2110 (sub-plans MMM or MPF or MRA or PRA or SWR) Restriction: MUSC-BS

PMUS 1026 - Piano Class IV (1 Credit)
Students entering this course are expected to have fluency in sight reading, major and minor scales. The course focuses on harmonizing with complex chords, playing by ear, improvisation, and playing repertoire in broader range of key signatures. Students perform in both individual and group settings. Note: This course is restricted to Music-Majors only. Course meets in Roland Piano Lab. Prereq: PMUS 1025. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1025 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1040 - Class Guitar (1 Credit)
Designed to provide each student with a basic knowledge of the fretboard. The course material focuses on beginning note reading, basic chord forms and elementary improvisation. Students have the opportunity to perform in both individual and group settings. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1041 - Class Guitar II (1 Credit)
This group guitar class is designed to go beyond PMUS 1040 and provide students with an advanced knowledge of the fretboard. The course material focuses on advance position note reading, complex chord forms and scale vocabulary. Students have the opportunity to perform in both individual and group settings. Max hours: 1 Credit.
Grading Basis: Letter Grade
Repeatable. Max Credits: 1.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1045 - Class Guitar I for Non-Majors (1 Credit)
This class will address basic techniques and concepts of playing the guitar, for non-majors. Students will gain a basic proficiency with regard to picking and fingerstyle technique, and learn essential contemporary harmony through the performance of etudes and songs. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1046 - Class Guitar II for Non-Majors (1 Credit)
This class will address basic techniques and concepts of playing the guitar, for non-majors. Students will gain a basic proficiency with regard to picking and fingerstyle technique, and learn essential contemporary harmony through the performance of etudes and songs. Prereq: PMUS 1045. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1045

PMUS 1050 - Voice Class I (1 Credit)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Development of technique, confidence, and control through group and solo singing. Development of repertoire that includes contemporary and commercial vocal styles. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1051 - Voice Class I for Non-Majors (1 Credit)
Voice technique and repertoire for non-music majors taught in a group setting. Students will learn basics of healthy singing technique and how to sing in multiple genres in both group and solo formats. For non-majors with little or no previous singing experience. Max hours: 1 Credit.
Grading Basis: Letter Grade

PMUS 1060 - Voice Class II (1 Credit)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Extension of PMUS 1050, with opportunity to continue to develop individual skills in singing. Development of technique, confidence, and control through group and solo singing. Development of repertoire that includes contemporary and commercial vocal styles. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1061 - Voice Class II for Non-Majors (1 Credit)
Intermediate Voice technique for non-majors taught in a group setting. Students will learn elements of technique, style and repertoire geared toward non-majors. Some singing experience or successful completion of Voice I for Non-Music Majors required. Prereq: PMUS 1051 or permission from the instructor. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1051

PMUS 1100 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common practice period of classical music, and their relationship to contemporary music concepts. Coreq: PMUS 1110 and PMUS 1023. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1101 - Music Theory & Ear Training Lab (1 Credit)
Provides supplemental instruction and tutoring for students enrolled in Theory I and Ear Training Sight Signing I. Course activities include training in the following subject areas: scale formation and identification, chord spelling and identification, interval spelling and identification, basic harmonic analysis and rhythmic dictation. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 1105 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common periods of practice, and their relationship to contemporary music concepts. Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115 and PMUS 1105.

PMUS 1110 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Coreq: PMUS 1100 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Coreq: PMUS 1100/MU 1110 and PMUS 1110/MU 1120 and PMUS 1023/MU 161B Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1115 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1105. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to General Music Minors, GMUS-MIN. Coreq: PMUS 1115 and PMUS 1105.

PMUS 1119 - Ear Training and Sight Singing I (1 Credit)
An aural skills laboratory course that reinforces the concepts taught in Music Theory I through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB.

PMUS 1120 - Music Theory I (3 Credits)
Study of the evolution of harmonic and melodic procedures, as derived from the common periods of practice, and their relationship to contemporary music concepts. Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors with a sub-plan of MST or MSB.

PMUS 1200 - Music Theory II (3 Credits)
The study of harmonic and melodic elements as they relate to modern, jazz, and commercial music. Topics include contemporary chord spelling, chord substitution, transposition, voice leading, harmonic analysis and modes. Prereq: PMUS 1023, 1100, and 1110. Coreq: PMUS 1210 and PMUS 1024. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1023/MU 161B, 1100/MU 1110, and 1110/MU 1120 Coreq: PMUS 1210 and 1024/MU 162B Restriction: Restricted to MUSC-BS majors within in the College of Arts and Media

PMUS 1210 - Ear Training and Sight Singing II (1 Credit)
An intermediate aural skills laboratory course that reinforces the concepts taught in Music Theory II through interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music.. Prereq: PMUS 1100 and PMUS 1110. Coreq: PMUS 1200 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1023/MU 161B, 1100/MU 1110, and 1110/MU 1120 Coreq: PMUS 1200/MU 1130 and 1024/MU 162B Restriction: Restricted to MUSC-BS majors within in the College of Arts and Media

PMUS 1211 - Ear Training and Sight Singing II (1 Credit)
An intermediate aural skills laboratory course that examines interval, melodic, harmonic, and rhythmic dictation as well as the preparation and sight singing of music. Prereq: PMUS 1119; Restricted to MUSC-BS majors with a sub-plan of MST. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1119; Restricted to MUSC-BS majors with a sub-plan of MST.

PMUS 1310 - Sight Reading and Improvisation (2 Credits)
Explores the techniques and concepts of instrumental jazz/commercial improvisation and beginning sight reading. Major concepts include understanding and interpreting the construction of jazz harmonic nomenclature and the mastery of the melodic elements of improvisation. Prereq: PMUS 1200, 2.0 credits from PMUS 1801 to PMUS 1823 (MIS Applied Lesson). Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200 and (2.0 credit hours from PMUS 1801-1823)
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 1420 - UCD A Cappella Voices Ensemble (1 Credit)
Beginning Ensemble. A cappella choir. This course will focus on choral singing to further the student's musical and vocal skills. Emphasis will be on successful preparation for the advanced a cappella groups. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 1440 - Acoustic Guitar Ensemble (1 Credit)
Beginning Ensemble. This course explores the techniques and repertoire of acoustic guitar. Musical styles include: jazz, Latin, bluegrass, Renaissance, Baroque, tango and blues. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 1470 - Performance Practice Ensemble (1 Credit)
This beginning-level ensemble explores individual and group performance settings for first year audition-based MEIS students. Course skills include: performance protocol, presentation, self assessment and peer assessment. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1480 - Improvisation I (2 Credits)
Introduction to the techniques and concepts of instrumental improvisation. Major concepts include identifying and improvising over common musical forms, understanding chord construction and chord/scale relationships, and developing an ability to improvise appropriately in a number of common styles. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 1500 - General Recital (1 Credit)
This pass/fail course is a co-requisite for all students enrolled in applied music instruction. Students will evaluate and critique musical performances and presentations as well as develop an informed understanding of live musical performance as it pertains to diversity of genre and excellence in musical achievement. Restriction: Restricted to MUSC BS majors, and GMUS minors. Repeatable. Max hours: 12 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 12.
Restriction: Restricted to BS MUSC majors, and GMUS minors

PMUS 1502 - Applied Bass (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1522 - Applied Bassoon (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1532 - Applied Clarinet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1542 - Applied Bass Clarinet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1552 - Applied Flute (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1562 - Applied French Horn (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1572 - Applied Guitar (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1574 - Applied Guitar, Singer/Songwriter (1 Credit)
Private instruction guitar specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program and have declared guitar as their primary instrument. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1582 - Applied Banjo (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1610 - Topics in Performance Music (3 Credits)
Various topics related to music performance. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PMUS 1612 - Applied Drum Kit (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1620 - Topics: Performance Music II (2 Credits)
Various topics related to music performance. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1630 - Topics: Performance Music III (3 Credits)
Various topics related to music performance. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PMUS 1632 - Applied World Percussion (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1642 - Applied Piano (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1644 - Applied Piano, Singer/Songwriter (1 Credit)
Private instruction in piano specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program and have declared piano as their primary instrument. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1662 - Applied Saxophone (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1672 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Restriction: Restricted to MUSC majors within the College of Arts and Media. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1682 - Applied Trombone (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1692 - Applied Trumpet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1702 - Applied Violin (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1712 - Applied Viola (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1722 - Applied Cello (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1732 - Applied Voice (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 1734 - Applied Voice, Singer/Songwriter (1 Credit)
Private instruction in voice specific to singer/songwriter majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Students perform in a general recital and jury. Restricted: BS-MUSC SWR. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Student must be accepted as a Singer/Songwriter major in the music program. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.

PMUS 1801 - Appl Electric Bass, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1802 - Appl String Bass, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1803 - Applied Guitar, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1804 - Applied Percussion, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1805 - Applied Drum Kit, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1806 - Applied Piano, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1808 - Applied Voice, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1809 - Applied Electronic Digital Instrument, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1815 - Applied Banjo, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1821 - Applied Cello, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1822 - Applied Viola, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1823 - Applied Violin, Non-Juried (1 Credit)
Private music lessons for Music Industry Studies majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Note: Only available to non audition based music majors in the Music Industry Studies emphasis area. Coreq: PMUS 1500 and at least 7 non-applied lesson credits. Prereq: Acceptance to the MEIS program. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 1901 - Applied Electric Bass (1 Credit)
Private music lessons for General Music Minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music Minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1903 - Applied Guitar (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1905 - Applied Drum Kit (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1906 - Applied Piano (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music Minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1908 - Applied Voice (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1909 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for General Music minors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 1923 - Applied Violin (1 Credit)
Private music lessons for General Music minors majors. Lessons emphasize developing fundamental technique, learning and performing standard repertoire, understanding the foundations of musicality, sight reading and developing rhythmic accuracy. Restriction: Restricted to General Music minors, GMUS-MIN. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restricted to General Music minors, GMUS-MIN.

PMUS 2020 - Prague's Musical Legacy (3 Credits)
Introduces students to composers and music of central Europe, with an emphasis on Czech music and culture. Additional topics include: aesthetics of central European film music; current trends in Slavic music; and the influence of the Czech language and history in music creation.
Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PMUS 2050 - The Holistic Musician (3 Credits)
This course is designed to examine and explore the development and practice of health and wellness for musicians, identifying and establishing career objectives, and developing core strategies to thrive as a contemporary artist-musician. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 2092 - Commercial Piano Styles I (2 Credits)
This course will teach students how the piano is used in major commercial piano styles of the twentieth and twenty-first centuries. Students will develop a found of skills and knowledge that can be applied to professional music settings. Students must pass a piano audition or have permission from the instructor. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 2093 - Commercial Piano Styles II (2 Credits)
This course with teach students in-depth stylistic performance skills, strategic improvisation, composition, and arranging. Students must pass a piano audition, or complete PMUS 2092, or have permission from the instructor. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2095 - Commercial Guitar Styles and Theory - Harmony (2 Credits)
A comprehensive guitar course that focuses on harmonic theory specific to the guitar fingerboard. Topics include: chord voicing and inversions, jazz and commercial accompaniment styles including walking bass, bossa nova, funk and finger picking. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2096 - Commercial Guitar Styles and Theory - Melody (2 Credits)
A comprehensive guitar course that focuses on harmonic theory specific to the guitar fingerboard. Topics include: tetrachords, scales, modes, arpeggios, finger technique development and improvisation. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2097 - Commercial Singing I (2 Credits)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Development of contemporary solo vocal repertoire (pop, rock, jazz, rhythm and blues) and traditional styles. Training in all aspects of vocal performance needed for live performance and recording sessions (microphone technique, stage presence, appropriate vocal styles and delivery). Development of solid understanding of vocal technique and its application to all vocal styles. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 2098 - Commercial Singing II (2 Credits)
Fundamentals of voice production: posture, breath management and support, tone, resonance, diction, phrasing and interpretation. Extension of PMUS 3010, with opportunity to continue to develop individual skills in commercial solo singing. Development of contemporary solo vocal repertoire (pop, rock, jazz, rhythm and blues) and traditional styles. Training in all aspects of vocal performance needed for live performance and recording sessions (microphone technique, stage presence, appropriate vocal styles and delivery). Development of solid understanding of vocal technique and its application to all vocal styles. Prereq: PMUS 3010. Max hours: 2 Credits.
Grading Basis: Letter Grade

PMUS 2100 - Music Theory III (3 Credits)
Exposes students to the theoretical aspects of Western European classical music from the Baroque period to the Classical period. Emphasis is placed on the melodic aspects of classical music including the creation of melody and the combining of melodies into polyphonic structures. Prereq: PMUS 1200, 1210, and 1024. Coreq: PMUS 1025 and 2110. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1024/MU 162B, 1200, and 1210 Coreq: PMUS 1025, PMUS 2110 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 2110 - Ear Training and Sight Singing III (1 Credit)
An advanced laboratory course designed to help students listen to music analytically and to apply the harmonic principles learned in Music Theory III to the performance of music. Prereq: PMUS 1200 and PMUS 1210. Coreq: PMUS 2100 and PMUS 1023. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PMUS 1024/MU 162B, 1200, and 1210 Coreq: PMUS 1025 and 2100 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media
Typically Offered: Fall.

PMUS 2200 - Jazz Theory (3 Credits)
Explores music theory as it applies to the genres of jazz and popular music. The topics include the theory of jazz improvisation, an analysis of jazz and popular music forms, the transcription and analysis of pop/jazz rhythms and melodies, and chord substitutions. Prereq: PMUS 1200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200/MU 1130 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2220 - Songwriting Production (3 Credits)
This course explores methods of composition and arranging using sample-based software. Prereq: PMUS 1200, PMUS 1210 and MUSC 2300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200/MU 1130, 1210, and PMUS 2310/MUSC 2300
Restriction: Restricted to MUSC majors

PMUS 2310 - Introduction to Songwriting (3 Credits)
Studies the craft of songwriting. Emphasis is on the creation of original melodies and lyrics. A variety of non-classical contemporary musical styles are considered. Prereq: PMUS 1100, and either PMUS 1023 or PMUS 1040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1100, and either PMUS 1023 or PMUS 1040.

PMUS 2315 - Introduction to Songwriting (3 Credits)
Studies the craft of songwriting. Emphasis is on the creation of original melodies and lyrics. A variety of non-classical contemporary musical styles are considered. Prereq: PMUS 1105, 1115 and (1.0 credit from PMUS 1901-1923). Restriction: Restricted to General Music Minors GMUS-MIN. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1105, 1115 and (1.0 credit from PMUS 1901-1923).
Restriction: Restricted to General Music Minors GMUS-MIN.

PMUS 2320 - Songwriting Analysis (3 Credits)
This course presents an analysis of songs across genres and decades, including pop, rock, folk, singer/songwriter, punk, rap, indie, and bluegrass. Students isolate and compare lyrical, melodic, harmonic, rhythmic, and formal elements. Prereq: PMUS 1200. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200

PMUS 2420 - Electro/Acoustic Ensemble (1 Credit)
Intermediate Ensemble. This course will study established methods used as agents of musical creativity in the practice of improvised music. Focus on real-time musical collaboration utilizing musical vocabularies from a wide range of sources. Instrumentation of many kinds may be utilized. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2430 - Pop/Rock Ensemble (1 Credit)
Intermediate Ensemble. This course will focus on group rehearsals of contemporary music with challenging technical and vocal requirements. Students will gain experience in transcribing and creating simple arrangements, learning adequate musicality, performing presentation and group cooperation. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2435 - Hip Hop/R&B Ensemble (1 Credit)
Intermediate Ensemble. This course will focus on group rehearsals of hip hop and R&B with challenging technical and vocal requirements. Students will gain experience in transcribing and creating simple arrangements, learning adequate musicality, performing presentation and group cooperation. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PMUS 2450 - Bluegrass Ensemble (1 Credit)
Ensemble designed to give students the opportunity to explore Bluegrass music and related folk/country styles through performance, listening and discussion. Important artists, repertoire, musical trends, and historical perspectives will be studied. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.
Typically Offered: Fall, Spring.

PMUS 2470 - Mobile Device Ensemble (1 Credit)
This ensemble will be comprised of students utilizing only laptop computers and mobile devices (e.g., iPads & iPhones) to create music. The ensemble will explore various contemporary styles including house, dance, ambient and other current electronic music. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.

PMUS 2490 - Django Jazz Ensemble (1 Credit)
Ensemble designed to give students the opportunity to explore the genre "gypsy jazz" and related styles through performance, listening and discussion. Important artists, repertoire, musical trends, and historical perspectives will be studied. Open to advanced instrumentalists and vocalists, audition based. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2495 - New Electronics Orchestra Ensemble (NEO) (1 Credit)
A performance laboratory for the combination of electronic and acoustic instruments, including improvisation, composition, as well as live video and game sound design. Class requires either an audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 2502 - Applied Bass (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2572 - Applied Guitar (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572 (Two semesters). Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2582 - Applied Banjo (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2612 - Applied Drum Kit (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2632 - Applied World Percussion (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2642 - Applied Piano (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2672 - Applied Electronic Digital Instrument (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2692 - Applied Trumpet (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2702 - Applied Violin (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2712 - Applied Viola (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2722 - Applied Cello (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2732 - Applied Voice (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2742 - Applied Tuba (1 Credit)
Private music lessons for audition-based music majors. Lessons emphasize developing proficient technique, learning and performing advanced repertoire, demonstrating musicality, developing rhythmic accuracy and improvising. Students perform in a general recital and jury. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1742 (Two semesters). Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 2750 - Functional Guitar Skills: Acoustic Guitar Styles (2 Credits)
This course is designed to introduce students to the fundamental architecture and techniques of contemporary acoustic guitar styles. The first part of the course will explore the techniques, repertoire and styles of Fingerstyle Guitar, while the second half will be dedicated to Flatpicking styles and techniques. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2751 - Functional Guitar Skills: Electric Guitar Styles (2 Credits)
This course is designed to introduce students to the fundamental architecture and techniques of contemporary electric guitar styles with regard to studio and live performance situations. Students will also explore the business aspects of music performance including marketing, self-assessment, career strategies, recording, and press kits. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 2855 - Music in Cuba Study Abroad (3 Credits)
Explores Cuban music in its cultural context, examining the development of musical genres, and the current musical and cultural landscape. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3060 - Ensemble Engineer (1 Credit)
This engineer position is designed to provide audio support for a various performing ensembles. Duties include live audio reinforcement during concerts and rehearsals, audio archiving, organization and equipment management. Enrollment is limited to one semester for non-audition track students and two semesters for audition-track students. Prereq: MUSC 4530. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: MUSC 4530

PMUS 3070 - Ensemble Manager (1 Credit)
This manager position is designed to provide booking, promotional and organizational support for various performing ensembles. Enrollment is limited to one semester for non-audition track students and two semesters for audition-track students. Prereq: MUSC 3690. Repeatable. Max Hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: MUSC 3690

PMUS 3100 - US Music: Social & Political Impact (3 Credits)
Examines and describes the social meaning of American music with particular reference to the roles of major ethnic groups in the creation of this music and the way that the music reveals attitudes toward these groups. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

PMUS 3110 - Social and Political Implications of American Music (3 Credits)
Examines and describes the social meaning of American music with particular reference to the roles of major ethnic groups in the creation of this music, and the way that the music reveals attitudes toward these groups. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3200 - Popular Music Performance Skills (2 Credits)
Students develop live performance skills including expression, stage presence and creating energy on stage, as well as connecting with the audience. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall, Spring.

PMUS 3210 - Introduction to Teaching Private Music Lessons (3 Credits)
Prepares students to teach private music lessons. Includes a survey of teaching styles from around the world, exercises, guest lectures, practical guidance for establishing a teaching studio and student research presentations. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to MUSC majors, MUIS and GMUS minors within the College of Arts and Media.

PMUS 3220 - Vocal Pedagogy (2 Credits)
Students will develop a working knowledge of postural, breathing, articulatory, and vocal anatomy, vocal hygiene, and methodology prior to teaching voice in to prevent harm. Students will learn how to listen critically and develop intuition, analytical, and diagnostic skills.
Restriction: Restricted to Music majors. Max hours: 2 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3300 - Advanced Jazz Improvisation (2 Credits)
Explores the techniques and concepts of instrumental jazz/commercial improvisation and sight reading. Major concepts include understanding and interpreting the construction of jazz harmonic nomenclature and the mastery of the melodic elements of improvisation. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 2200 Restriction: Restricted to MUSC majors

PMUS 3310 - Songwriting Analysis & Creative Exercises (3 Credits)
Presents concepts of songwriting that build upon those presented in MUSC 2300. Students are expected to understand and discuss musical concepts and lyric structure and use these concepts in the creation of original songs. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3320 - Popular Music Arranging (3 Credits)
This course will focus on techniques, technologies and strategies for contemporary arranging. Students score original compositions for various instrumentation using notation software. Prereq: PMUS 1200, PMUS 1210, and PMUS 1024. Restriction: Restricted to MUSC-BS majors within the College of Arts and Media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1200, PMUS 1210, and PMUS 1024 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3330 - Advanced Vocal Improvisation (2 Credits)
Provides study of harmony, style and advanced improvisation techniques for vocalists. Course activities include study of scat singing, syllables, accents, rhythmic patterns, and phrasing over standard chord changes in several genres. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PMUS 2200 Restriction: Restricted to MUSC majors
Typically Offered: Spring.

PMUS 3340 - Commercial Songwriting (3 Credits)
This course is designed to explore songwriting for publishing and that supports moving picture. Students will gain an understanding and have practical application of analyzing, understanding, writing and pitching music for publishing, film, tv and advertisement. Prereq: PMUS 3310. Restriction: Restricted to Sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 3310 Restriction: Restricted to Sophomore standing or higher.

PMUS 3450 - Singer/Songwriter Ensemble (1 Credit)
Advanced Ensemble. Focus on student compositions of original songs with lyrics and instrumental accompaniment including creation of lead sheets for band performances. Individual and group songwriting is explored. Students participate in community-building activities including community engagement and a songwriting retreat. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 3460 - Ninth Street Singers Ensemble (1 Credit)
Signature Ensemble. Elite a cappella mixed choir. This course will focus on group rehearsals of various genres of vocal ensemble music, including pop, rock, jazz, musical theater, and gospel. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 3502 - Applied Bass (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502 and PMUS 2502 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3572 - Applied Guitar (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572 and PMUS 2572 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3582 - Applied Banjo (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582 and PMUS 2582 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3612 - Applied Drum Kit (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612 and PMUS 2612 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3632 - Applied World Percussion (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632 and PMUS 2632 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3642 - Applied Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642 and PMUS 2642 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3652 - Applied Jazz Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1652 and PMUS 2652 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3662 - Applied Saxophone (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1662 and PMUS 2662 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3672 - Applied Electronic Digital Instrument (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672 and PMUS 2672 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3692 - Applied Trumpet (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692 and PMUS 2692 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3702 - Applied Violin (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702 and PMUS 2702 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3712 - Applied Viola (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712 and PMUS 2712 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3722 - Applied Cello (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722 and PMUS 2722 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3732 - Applied Voice (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing and performing repertoire, demonstrating a high level of musicality, cultivating superior performance practice, identifying musical goals and preparing and performing a junior recital. Note: Students must be an audition-based music major and accepted to performance emphasis. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732 and PMUS 2732 (two semesters each), and successful completion of sophomore proficiency. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 3772 - Applied Singer/Songwriter (2 Credits)
This is a 2-credit course consisting of one-on-one, hour-long weekly lessons in songwriting and performance skills. Aspects of transcription, analysis, and career development will be incorporated. Co-requisites - PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring.

PMUS 3825 - Real History of Rock and Roll (3 Credits)
Examines the historical and social framework developments in music from its roots in country, through jazz and blues to current trends. Special emphasis is given to guest lecturers and their expertise performing, covering and presenting the music. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3827 - History Of Jazz (3 Credits)
This course will give students an inside look at the history and radical changes brought about by the musicians, technology and the social interplay between US social history and jazz music by examining the music & musicians that performed it. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3828 - History of Bluegrass (3 Credits)
This course will cover the history of the music and musicians that contribute to the development of the Bluegrass musical style. Topics to be covered include early country music, traditional bluegrass, and contemporary bluegrass. Restriction: Restricted to students with a junior or senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Juniors and Seniors only.

PMUS 3829 - A Survey of Heavy Metal (3 Credits)
A history of heavy metal from the 1970's to present day exploring how religion, politics, community, and censorship have helped to shape this unique genre of music. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3832 - Music in Culture (3 Credits)
A broad introduction to music as a human phenomenon, this course examines how diverse musics live in and as culture. Through a study of diverse musical elements, genres, periods, styles, and composers in jazz, folk, popular, and world music traditions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PMUS 3835 - History of Electronic Music (3 Credits)
This course will give students an inside look at the history and radical changes brought about by the musicians, technology and the social interplay between US social history and electronic music by examining the music & musicians that performed it. Restriction: Restricted to sophomore standing or higher. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

PMUS 3840 - Independent Study: PMUS (1-3 Credits)
Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PMUS 4060 - Music Theory Analysis (3 Credits)
Students analyze the harmonic, melodic, and formal aspects of the music from various musical time periods and genres which include Baroque, Classical, Romantic, Contemporary Classical, jazz and popular music. Prereq: PMUS 2110 and 2200. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 2110 and PMUS 2200 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media

PMUS 4200 - Senior Recital Project (2 Credits)
The capstone course for performance majors that coincides with their senior recital. The project focuses on musical and thematic material from the student's senior recital and may include: historical research, theoretical analysis, transcriptions and creation of a digital portfolio. Max hours: 2 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4310 - Genre Songwriting for TV/Film and Emerging Media (3 Credits)
This course explores songwriting through genre characteristics and methodologies that intersect with synchronization licensing for TV, film, and emerging media. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PMUS 1025, 2100, 2110, and 3310 Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.
Typically Offered: Fall.

PMUS 4410 - Claim Jumpers Ensemble (1 Credit)
Signature Ensemble. The Claim Jumpers will focus on group rehearsals of significant traditional jazz literature, masterworks of classic jazz of the 1920's, and creativity within the traditional jazz genre at the highest level. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4430 - Guitar Ensemble (1 Credit)
Signature Ensemble. Advance jazz guitar group. This course will focus on group rehearsals of bebop and fusion. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4440 - Voz de la Clave (1 Credit)
Signature Ensemble. This ensemble performs Salsa and Afro-Caribbean music. Ensemble time is spent rehearsing repertoire and learning about Latin music concepts. Prereq: Audition or meeting with ensemble faculty. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4470 - Lark/Advanced A Cappella Ensemble (1 Credit)
Lark is an advanced a cappella ensemble for female identifying individuals. Admission to this group is by audition only. Members must have strong sight reading skills, advanced musicianship and performance skills. Lark performs several times per semester. Repeatable. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

PMUS 4502 - Applied Bass (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1502, PMUS 2502, PMUS 3502 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4572 - Applied Guitar (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1572, PMUS 2572, PMUS 3572 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4582 - Applied Banjo (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1582, PMUS 2582, PMUS 3582 (two semesters each), and successful completion of Junior Recital. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4600 - Topics in Music Performance (3 Credits)
Various topics related to music performance. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4612 - Applied Drum Kit (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1612, PMUS 2612, PMUS 3612 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4632 - Applied World Percussion (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1632, PMUS 2632, PMUS 3632 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4642 - Applied Piano (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1642, PMUS 2642, PMUS 3642 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4672 - Applied Electronic Digital Instrument (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1672, PMUS 2672, PMUS 3672 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4692 - Applied Trumpet (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1692, PMUS 2692, PMUS 3692 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4702 - Applied Violin (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1702, PMUS 2702, PMUS 3702 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4712 - Applied Viola (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1712, PMUS 2712, PMUS 3712 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4722 - Applied Cello (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1722, PMUS 2722, PMUS 3722 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4732 - Applied Voice (2 Credits)
Private music lessons for audition-based music majors. Lessons emphasize perfecting musical technique, memorizing professional-level repertoire, demonstrating an expert level of musicality, analyzing repertoire, achieving a musical identity, cultivating superior performance practice and preparing and performing a senior recital. Note: Students must be accepted as an audition-based music major. Instructor permission. Coreq: PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson credits. Prereq: PMUS 1732, PMUS 2732, PMUS 3732 (two semesters each), and successful completion of Junior Recital. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to MUSC-BS majors within the College of Arts and Media.

PMUS 4772 - Applied Singer/Songwriter (2 Credits)
This is a 2-credit course consisting of one-on-one, hour-long weekly lessons in songwriting and performance skills. Aspects of transcription, analysis, and career development will be incorporated. Plan Code: MUSC-BS SWR; Co-requisites - PMUS 1500, enrollment in an ensemble and at least 7 non-applied lesson. Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring.

PMUS 4840 - Independent Study: PMUS (1-3 Credits)
Repeatable.Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Philosophy (PHIL)

PHIL 1012 - Truth, Reality, and the Good Life: Introduction to Philosophy (3 Credits)
We're commonly told to "do the right thing," and everybody seems to agree that we should. But what is right? What is wrong? How can we see and know the difference? This course helps students examine and analyze the ethical concepts, situations, and problems raised by these fundamental questions. Specific problems will vary with contemporary concerns, e.g., poverty, war, injustice, famine, abortion, punishment, and environmental sustainability. The course goal is to help students sharpen their ethical reasoning skills so they can better navigate and contribute to the ethical, social, and political arenas in which they will live their lives. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

PHIL 1020 - Right, Wrong, and Seeing the Difference: Introduction to Ethics (3 Credits)
We're commonly told to "do the right thing," and everybody seems to agree that we should. But what is right? What is wrong? How can we see and know the difference? This course helps students examine and analyze the ethical concepts, situations, and problems raised by these fundamental questions. Specific problems will vary with contemporary concerns, e.g., poverty, war, injustice, famine, abortion, punishment, and environmental sustainability. The course goal is to help students sharpen their ethical reasoning skills so they can better navigate and contribute to the ethical, social, and political arenas in which they will live their lives. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

PHIL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PHIL 1700 - Philosophy and the Arts (3 Credits)
Considers philosophical questions involved in the analysis and assessment of artistic expressions and of the objects with which the arts, including the literary arts, are concerned. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 2441 - Logic, Language and Scientific Reasoning (3 Credits)
Intro course in argumentation, critical thinking and scientific reasoning. Covers rules of logical inference, informal fallacies, problem solving, and probabilistic reasoning. Enhances analytical and critical thinking skills tested on LSAT and MCAT, central to advancement in sciences, and broadly desired by employers. Max Hours: 3 Credits. Term offered: spring, summer, fall. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

PHIL 2510 - Philosophy of Nature (3 Credits)
Critical comparison of different views of nature presupposed in science, art, religion, and environmental policy. Concepts of "natural" are examined in relation to such issues as animal rights, wilderness preservation, synthetic landscape, technology, pollution, and population control. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: 15 hours of 2.75 GPA. Department consent required. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PHIL 3002 - Ancient Greek Philosophy (3 Credits)
What is philosophy? What is the nature of reality? What is the difference between knowledge and opinion? What is the best kind of life for a human being to lead? Ancient Greece was the birthplace of Western philosophy, and this course traces the history of ancient Greek thought, from Homer and Hesiod through the pre-Socratic thinkers (e.g. such figures as Thales, Pythagoras, Heraclitus, Parmenides, Zeno of Elea, Empedocles, Anaxagoras and Democritus) to Plato, Aristotle and later Hellenistic thought. Cross-listed with PHIL 5002. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, INTS 3003, RLST 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 3010 - Medieval Philosophy (3 Credits)
History of philosophy from Augustine through Scotus and Ockham, the 5th through the 14th centuries. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3022 - Knowledge, Perception, and the Search for Objectivity: Modern Philosophy (3 Credits)
How does physical matter relate to minds and the mental realm? How does objective reality related to what seems subjective — human knowledge, perception, and feeling, etc.? What is the role of logical thinking in connecting the objective and subjective areas of reality? Can philosophy ground knowledge so that scientific inquiry is safe from the challenges of skepticism? These are just a few of the problems posed by the “modern” period in philosophy, from roughly the end of the 16th century to the end of the 18th century. This course examines such epistemological questions and surveys key metaphysical themes that modern thinkers inherited from ancient and medieval philosophy. Figures typically include Descartes, Leibniz, Spinoza, Locke, Hume, and Kant, among others. Cross-listed with PHIL 5022. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3030 - Philosophies of the Good Life & Happiness (3 Credits)
Examines concepts and theories of happiness and their application in everyday living as discussed by major philosophers since antiquity (e.g., Aristotle, Kant, Nietzsche). Also considers critiques of Happiness (e.g., Freud, Schopenhauer). Recommended preparation: PHIL 1012 or PHIL 1020. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PHIL 3032 - Twentieth Century Analytic Philosophy (3 Credits)
Surveys representative philosophers, methods, and problems in the 20th century analytic tradition. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3050 - Propaganda: Truth, Lies, and Freedom (3 Credits)
All who live in this world must choose what to do. Some of those choices can rely on first-hand experience, but most rely on information, facts, and descriptions from external sources. As every programmer will tell you, "Garbage in, garbage out." Thus, getting "good" information is critical to our ability to live freely, autonomously, and ethically. It is typical for philosophy classes to teach logic and reasoning -- and those are important. But reasoning is useless if its content (or information) is deceptive, misleading, or incoherent. What's more, since democratic countries are premised upon knowledgeable citizens, the short-circuiting of reasoning by propaganda may be the greatest danger democracy has. The question becomes: what is propaganda? How do we define it? How do we locate it? And finally, how do we spell out what's (possibly) wrong with it? Accordingly, this course is an inquiry into the epistemic, technological, and ethical dimensions of propaganda. It will define propaganda, identify how it works, and seek to understand the variety of agents and motives who use propaganda to achieve their ends. (It is not assumed that propaganda is always good or always bad, by the way.) In addition to understanding the logical and epistemic nature of propaganda, this course will examine how it is disseminated. How do technologies (text, video, social media, algorithms, etc.) influence and foment misinformation? The overarching goal will be to become more aware and critical of propaganda we encounter so we can avoid "garbage" information which can manipulate us and prevent us from reasoning logically and ethically. Cross-listed with PHIL 5050. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3150 - History of Ethics (3 Credits)
Surveys the ethical thought of major figures in the history of philosophy, beginning with Plato and ending with the 19th century. Examples: Aristotle, Hume, Kant and Mill. (Class readings of primary philosophical texts.) Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3200 - Justice, Freedom, and Power: Social and Political Philosophy (3 Credits)
What is justice? What justifies a government as moral? Why should individuals obey the state’s laws? Can anarchism work? Is private property necessary to a free society? Is social justice? What is freedom — and what is oppression? Is gender, ethnic, and religious diversity necessary for a just society? Why? This course will raise these kinds of questions as it examines basic issues in social and political philosophy (e.g. justice, freedom, individuality, power and community). Cross-listed with PHIL 5200. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3250 - Business, Society, and Moral Responsibility (3 Credits)
Is business ethics an oxymoron? Of course not. But everyone in business, from the CEO to the new assistant, truly succeeds if they can address ethical problems with empathy and imagination. This course teaches students to deploy philosophical tools — logic and moral theory — to size up and solve contemporary moral issues in business. Topics may include corporate responsibility, advertising and manipulation, privacy and surveillance, equity and inclusion, and the tension between profit maximization and the duty to our fellow human beings. The larger meaning and purposes of work may also be addressed. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3280 - War and Morality (3 Credits)
Attempts to identify and analyze some of the major moral issues of war. When is a war just, when is it not? What are morally acceptable rules of engagement? What, if anything, justifies violating them? How does one evaluate terrorism and war against terrorism? What are moral alternatives to the violence of war? Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3300 - Special Topics in Philosophy (1-3 Credits)
Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 3340 - Investigating Nature: Introduction to the Philosophy of Science (3 Credits)
This course is designed to introduce students to the Philosophy of Science. (No background in philosophy is required.) Philosophy of Science is concerned with how best to use observation and experiment to learn about the world, whether we are investigating fundamental physical structures, the complex operations of biological organisms, or the social dynamics of human groups. Drawing on both historical and contemporary works, we will seek to understand, among other topics, what makes scientific inquiry distinct from other forms of human learning, what accounts for the credibility and objectivity of scientific claims, the influence of psycho-social biases on observation and theory formation, as well as whether accepting a scientific theory, explanation or hypothesis means that we think it is true. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3350 - Metaphysics (3 Credits)
Studies major theories of reality, including topics such as the nature of substance, space and time, and universals and particulars. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3360 - Epistemology (3 Credits)
Study of major theories of knowledge, including such problems as perception and the distinction between belief and knowledge. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3410 - Asian Philosophies and Religions (3 Credits)
We in the Western world encounter a vastly different world, a radically different "universe of meaning," when we examine the traditions of the East. Even what we tacitly assume to be "real" is claimed by the Hindus and Buddhists of India to be a grand illusion. The world of China is, again, very different from India. An examination of Tibetan and Japanese religious forms will conclude our study of Asian thought. Cross-listed with RLST 3410. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.

PHIL 3430 - How to think green: Environmental Ethics (3 Credits)
Is it wrong to extinguish a species? What makes cruelty to animals wrong? Do trees have rights? Is the earth a resource we can use any way we want? Is vegetarianism a more ethical way to live — or just another lifestyle choice? As citizens of the world, we are bombarded by such questions. Understanding what is fundamental clarifies thinking and coordinates action. This course introduces ethical theories relevant to problems such as animal and species welfare, deforestation, pollution, climate change, and the sustainability of the planet. By examining multiple perspectives, students gain confidence judging which issues and data are significant and deciding what kind of world we should create with our actions and inactions. Cross-listed with PHIL 5430, HUMN 5430 and SSCI 5430. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3440 - Introduction to Symbolic Logic (3 Credits)
Covers truth functional and quantificational logic through polyadic first order predicate calculus and theory of identity. Attention is given to such problems in metatheory as proofs of the completeness and consistency of systems of logic. Prereq: A passing grade in PHIL 2441 or MATH 3000 or permission from the instructor is required in order for students to enroll in this course. Cross-listed with MATH 3440. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHIL 2441 or MATH 3000
Typically Offered: Spring.

PHIL 3441 - Philosophical Reasoning Skills (3 Credits)
This course provides Philosophy majors and other philosophically interested students with the skills and tools necessary for effectively navigating philosophical discussions. In this course we will cover issues such as validity and soundness, as well as several systems useful for demonstrating validity. The course will in addition address important issues in the philosophy of language, including the very important question of definitions, as well as the use of thought experiments and avoidance of informal fallacies. Finally, since philosophical reasoning increasingly involves knowledge of the methods of scientific reasoning, those skills will also be included in the course. Cross-listed with PHIL 5441. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3500 - Ideology and Culture: Racism and Sexism (3 Credits)
What is “racism” or “sexism”? What is oppression? How do these ideas become invisible so that they structure ways people think, act? How do they inform policies, laws, and institutions? And what modifies or overturns such ideas? By answering such questions, this course helps students reflect on the formation of their own lives, practices, beliefs, and values. Topics may include ideology theory, naturalism, the equal protection clause, recent scientific discussions, socio-legal history, and social constructionism. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

PHIL 3550 - Philosophy of Death and Dying (3 Credits)
Historical overview of the metaphysical question of whether there is life after bodily death, beginning with classical arguments through the current debate over such phenomena as near death experiences and deathbed visions. Also focuses on ethical controversies such as suicide, euthanasia, and capital punishment, and the efficacy of philosophical consolations for grief. Strongly Recommended: Three hours of philosophy; preferably PHIL 1012 but if the student does not have coursework, consulting with the instructor prior to registration is strongly recommended. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3656 - Contemporary Religious Ethics: Jewish and Christian Traditions (3 Credits)
Historical and thematic introduction to ethics in Judaism, Roman Catholicism and Protestantism. A study of selected ethical issues: bio-medical, social justice, sexuality, economic justice, business and personal ethics. Strongly Recommended: English Composition, Intro to Philosophy, World Religions, World History or junior status. If the student does not have coursework or standing, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PHIL 3760 - Kant: Freedom, Reality, and the Mind (3 Credits)
Why do motives matter in ethics? What is an ethical duty? How do sensations and ideas combine to make reality unified and coherent? Kant's philosophy answers these questions by providing a profound synthesis of the philosophers before him. Kant's work still influences ethics, politics, metaphysics, epistemology, and science today. This course involves students in close study of Kant’s revolutionary thought as it appears in several of his major works. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of “C” in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5830. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 3833 - Existentialism (3 Credits)
Examines one of the most influential movements in recent European thought, beginning with existentialism's 19th century roots, and continuing on to the existentialist philosophers of the 20th century. Figures covered may include Dostoyevsky, Kierkegaard, Nietzsche, Heidegger, Sartre and de Beauvoir. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5833, HUMN 5833, and SSCI 5833. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA

PHIL 3981 - Chinese Philosophy and Culture (3 Credits)
China is a fascinating world with its own characteristic orientation to philosophical questions. Chinese thinkers produced the "Flowering of a Hundred Schools of Thought" in the Axial Age, the same period of time in which philosophy was coming to birth in ancient Greece. Covers some of the Chinese schools, including Confucianism, Taoism, Mohism, Legalis, Chinese "logic," and the later schools of schools of Neo-Confucianism, Neo-Taoism and Chinese Buddhism. Cross-listed with RLST 3660. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 3995 - Global Study Topics (1-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PHIL 4000 - 19th and 20th Century Continental Philosophy (3 Credits)
A seminar on key problems and thinkers in the nineteenth & twentieth century continental philosophical traditions and their contemporary significance. Cross-listed with PHIL 5000, HUMN 5000 and SSCI 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4040 - Skepticism (3 Credits)
Considers various forms of skepticism in the history of philosophy, as well as the ways that philosophers have responded to skepticism, especially in theories of belief. Note: PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5040. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4101 - Pragmatism: Classical American Philosophy (3 Credits)
The most significant philosophical tradition born in the United States is pragmatism. Examines several of the most important classical works of this tradition, the influence of thinkers who have helped to shape pragmatism, and the contemporary relevance of this tradition. Figures who may be included are: Emerson, Pierce, Royce, James, Dewey, Mead and Rorty. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5101, HUMN 5101, SSCI 5101. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4150 - Twentieth Century Ethics (3 Credits)
Surveys representative philosophers, methods, and/or problems in 20th century ethics. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4200 - Philosophical Problems and Contemporary Culture (3 Credits)
Issues and controversies in contemporary culture, their relation to modern theories of society, and their manifestations in the arts, science and technology, education, religion and ethics. PHIL 3002 or 3022, and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4220 - Art, Beauty, and Aesthetic Criticism: Philosophy of Art (3 Credits)
What makes something a work of “art”? How should art be interpreted or evaluated? Can we really debate about “taste” or beauty? Why do we call some people "artists" or some experiences “aesthetic”? Where does creativity come from? This course investigates such questions, offering a range of historical and contemporary answers, and examines the social, political, and philosophical roles of art in contemporary society. Methods of engaging these questions may include multimedia technologies as well as individual and group field trips to local art venues. Cross-listed with PHIL 5220 and HUMN 5220. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4230 - Postmodernism (3 Credits)
Traces the history of a set of ideas collectively known as postmodern. Disrupting traditional frameworks of knowledge, these concepts have had an enormous impact on the social sciences, the humanities, and the arts. Course readings expose students to the cross-disciplinary impact of postmodernism on theory, content, and method. Upper division standing, PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4242 - Medicine, Health Care, and Justice: Bioethics (3 Credits)
Anyone entering a medical profession must confront tough ethical issues and dilemmas. These often arise suddenly, so practitioners best preparation is to think ahead about what will likely occur. This course introduces students to a variety cases and philosophical theories useful to healthcare careers. For example, What is “health” and who determines it? Is there a right to health care? How should medical scarcity (vital organs, vaccines, supplies, etc.) be addressed? What duties are owed to patients by healthcare providers, and why? On what grounds may medical treatment be demanded — or refused? The goal of the class is to train students to be nimble and imaginative in how they reason about the difficult cases they will face in their career. Suggested prerequisite one or two previous courses in philosophy, and a minimum grade of C in each course are strongly recommended; if the student lacks this coursework, consult with the professor prior to registration. Cross-listed with PHIL 5242, SSCI 5242, HUMN 5242. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4260 - Why Obey the Law? Introduction to Philosophy of Law (3 Credits)
What is a legal “law”? What justifies its ability to force our compliance? How is law distinct from morality? What makes some laws immoral? Is ignorance of the law ever a valid excuse? We all find ourselves entangled with the law at some point. Sometimes we’re the victim and sometimes we stand accused; even beyond those special circumstances, we all have to live with the law and the many ways it regulates (or controls) our conduct. While this course is recommended for pre-law students, this course will every students to be intellectually critical of what law is, how it can and is justified, and how to assess it on grounds that reach beyond to law, such as logic or ethics. Both historical and contemporary sources will be used to survey theoretical positions on the nature of law. Figures may include (among others): Plato, Aristotle, Aquinas, Locke, Kant, Holmes, Mackinnon, Dworkin, Hart, Devlin, as well as more contemporary Supreme Court justices and case law. Suggested prerequisite one or two previous courses in philosophy, and a minimum grade of C in each course are strongly recommended; if the student lacks this coursework, consult with the professor prior to registration. Cross-listed with PHIL 5260. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4270 - Philosophy of History (3 Credits)
Examines critical and speculative theories of history, including the problems of methodology, explanation, values, and the relationship between history and social philosophy. PHIL 3002 or 3022 and a minimum grade of C in each previous philosophy course are strongly recommended, but if the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4300 - Mind, Body, and Consciousness: Philosophy of Mind (3 Credits)
Consideration of the problems in the philosophy of mind, such as the mind-body problem, the problem of our knowledge of other minds, the compatibility of free will and determinism, and discussion of such concepts as action, intention, motive, desire, enjoyment, memory, imagination, dreaming and self-knowledge. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5300. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 4308, ENGL 5308, PHIL 5308, WGST 4308, WGST 5308. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4341 - Latin American Philosophy (3 Credits)
This course introduces students to Latin American Philosophy by exploring its indigenous roots, its recurring themes of struggle against colonial domination, and the way this tradition works with and against European and Anglo-American philosophical ideas. Students will also learn about how questions of identity, especially those of ethnicity, have developed within this area of philosophy. Cross-listed with PHIL 5341. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PHIL 4350 - Philosophy of Science (3 Credits)
This course examines some of the central philosophical questions concerning the nature of scientific investigation, such as the logical relation of evidence to hypothesis, the objective adjudication of competing hypotheses, the logical function of modeling in empirical inquiry, the criterion for a classificatory system to underwrite induction and explanation, the explanatory relationships between the differing sciences, as well as the theoretical and pragmatic function of scientific law and its relationship to explanation. Cross-listed with PHIL 5350. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4360 - American Legal Process (3 Credits)
Introduces students to basic issues in American jurisprudence as well as to the elements and dynamics of the modern American legal system. Cross-listed with PHIL 5360. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4450 - Punishment and Social Justice (3 Credits)
We will use the critical tools of philosophy to think about how contemporary practices of punishment are justified, how they shape the world we live in and what alternative normative frameworks might be. Cross-listed with PHIL 5450. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4460 - Theories of Human Nature (3 Credits)
Consideration of such problems as the changeability and definability of human nature, and the possibility of a science of human nature. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4470 - Concepts of the Soul (3 Credits)
Asks the questions: What is the nature of the human being? What makes us "human?" Do humans have a "soul?" What is its nature? Is it different from the "spirit?" What is its ultimate fate? Examines the various theories put forward by philosophers of both Eastern and Western traditions. Cross-listed with PHIL 5470 and RLST 4440, 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4480 - Perspectives on Good and Evil (3 Credits)
Examines "problem of evil" as formulated in the philosophical tradition. Presents classical formulation of the problem, traditional solutions & classical critiques of each answer. Considers perspectives of various religious orientations, which deal differently with the question of suffering. Cross-listed with PHIL 5480, RLST 4480/5480. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHIL 4500 - Feminist Philosophy (3 Credits)
Seminar on key debates & figures in historical & contemporary feminist philosophy. Topics may include: rights, embodiment, gender, sexuality, race, reason, & violence. Figures may include: Wollstonecraft, Stanton, Beauvoir, Judith Butler, and bell hooks. Cross-listed with PHIL 5500, WGST 4500 & 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4600 - Questioning Religious Belief and Practice: Introduction to Philosophy of Religion (3 Credits)
Does God exist? Can the existence of God be proved? When is believing on faith acceptable? How or why is there a “problem of evil”? What are the attributes of a "god" and how can they be known, if at all? What is the relation of God to the world we experience? How does morality relate to religious belief and practice? The goal of the course is to broaden and deepen our understanding of key philosophical debates within religious traditions as we study prominent thinkers in the history of philosophy. Cross-listed with HUMN 5600, PHIL 5600, RLST 4060, RLST 5060, and SSCI 5600. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PHIL 4700 - Seminar in a Major Philosopher (3 Credits)
The major philosophical texts of one philosopher is studied in this course. Philosophers to be studied are major figures in the history of philosophy such as Plato, Aristotle, Kant and Hume. Note: May be taken for credit more than once. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

PHIL 4720 - Eastern Religious Thought (3 Credits)
Parallels the course in Western religious thought. The great religious traditions of the East, including Hinduism, Buddhism, Confucianism, and Taoism, are examined as they are presented in the writings of key philosophical representatives of each tradition. Cross-listed with RLST 4080. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4730 - Philosophy and Literature (3 Credits)
Considers the philosophical dimensions of literature. Strongly Recommended: PHIL 3002 or 3022, and a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5730, ENGL 4735 and 5735. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4735 - Rationalism (3 Credits)
Addresses the fundamental questions of truth and reality through natural reason. Topics vary and may include metaphysics and the rise of modern science; women and the enlightenment; historical problems and linguistic analysis. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5735. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4740 - Empiricism (3 Credits)
Considers the nature and importance of experience. Focuses on British Empiricism, but additional themes which vary may include: American pragmatism, logical positivism, scientific empiricism, phenomenology of experience. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5740. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4750 - Introduction to Phenomenology (3 Credits)
Examines the contribution of phenomenology to selected topics in the theory of meaning, philosophy of mind, ontology, and epistemology, through a study of such philosophers as Husserl, Heidegger, Sartre and Merleau-Ponty. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5750. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4755 - Philosophical Psychology (3 Credits)
Explores debates about psyche and body, mind and world, self and others, and consciousness and nature. Examines the philosophical questions related to those debates that arise within theories of perception, affect and cognition offered by influential psychological models. Cross-listed with HUMN 5750, SSCI 5750 and PHIL 5755. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4770 - Hegel (3 Credits)
A systematic study of the thought of G.W.F. Hegel through his most important and influential works: The Phenomenology of Spirit; The Encyclopedia of Philosophical Sciences; The Science of Logic; Lectures on the Philosophy of History; and his lectures on the history of philosophy, art and religion. Focus of the course varies. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4780 - Heidegger (3 Credits)
Studies the thought of Martin Heidegger, one of the most important philosophers of the 20th century. Includes texts from both Heidegger's early and later periods, and focuses on his analyses of human subjectivity and being. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4790 - Nietzsche (3 Credits)
A close study of Nietzsche's philosophical writings, with attention to his significance for philosophy in the 20th century and beyond. Cross-listed with PHIL 5790. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4795 - Marx and Marxism (3 Credits)
A close study of the most influential works of Karl Marx and subsequent theorists who provide either an influential interpretation of the works of Marx or contribute to an innovative application or elaboration of the basic tenets of Marxism. Cross-listed with PHIL 5795. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4800 - Plato (3 Credits)
A careful study of Plato's writings, emphasizing the dialogue form, and discussion of Plato's significance for the history of ethics, political theory, psychology, metaphysics and epistemology. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5800. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4810 - Aristotle (3 Credits)
Examines Aristotle's systematic philosophy and discusses its contributions to logic, epistemology, physics, psychology, metaphysics, ethics and political theory. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5810. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHIL 4812 - Special Topics in Philosophy (3 Credits)
Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

PHIL 4820 - Hume (3 Credits)
Considers the work of eighteenth century philosopher David Hume. Emphasis on unity of Hume's thought. Strongly Recommended: PHIL 3002 or 3022, a minimum grade of "C" in each previous philosophy course. If the student does not have this coursework, consulting with the instructor prior to registration is strongly recommended. Cross-listed with PHIL 5820. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4840 - Independent Study: PHIL (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PHIL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHIL 4900 - John Dewey (3 Credits)
John Dewey was one of the most important of the American philosophers and public intellectuals of the twentieth century. Topics may include Dewey's philosophical naturalism, pragmatist epistemology, process metaphysics and philosophies of experience, aesthetics, religion, technology and democracy. Cross-listed with PHIL 5900. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4920 - Philosophy of Media and Technology (3 Credits)
A philosophical examination of interrelationships between contemporary media, technology, and their impacts upon character of contemporary life and values. Topics may include ethics, epistemology, democracy, advertising, media literacy and criticism. Cross-listed with PHIL 5920, HUMN 5920, SSCI 5920. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4933 - Philosophy of Eros (3 Credits)
What does it mean to understand philosophy as an erotic activity? This question will be examined, first by studying Plato's dialogues-such as Lysis, Symposium and Republic-and then by reading texts from Sigmund Freud, Michael Foucault and others. Cross-listed with PHIL 5933, WGST 4933/5933, SSCI 5933 and HUMN 5933. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHIL 4950 - Honors Thesis (3-6 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Additional Information: Report as Full Time.

PHIL 4980 - Special Topics in Philosophy (1-3 Credits)
Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

Physics (PHYS)

PHYS 1052 - General Astronomy I (4 Credits)
The history of astronomy is studied from early civilizations to the present. The basic motions of the earth, moon, sun, and planets are discussed both qualitatively and quantitatively, using elementary principles of physics. Properties of our solar system are discussed in detail, including results from unmanned space probes. Note: An additional 30 hours of laboratory work (at times to be arranged), plus appropriate report preparation time, are required to complete laboratory component of the course. Note: High school algebra or equivalent are strongly recommended preparation for this course. Term offered: spring, fall. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC1
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC1, Nat Phy Sci:Course w/Req Lab; Denver Core Requirement, Biol Phys Sci - Lec/Lab.
Typically Offered: Fall, Spring.

PHYS 1100 - Foundations of Physics (4 Credits)
One-semester non-lab survey course especially designed for non-science majors. Acquaints students with some of the major principles and methods of physics. Includes applications of physics to everyday life and some discussion of the historical development of physics. Note: this course assumes that students have a good working knowledge of elementary algebra. Term offered: spring, summer, fall. Max Hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - No Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Offered irregularly. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

PHYS 1300 - Contemporary Topics in Physics. (2 Credits)
Covers various current topics in physics at a qualitative level. Designed primarily for students intending to major in physics, engineering, and chemistry. Max hours: 2 Credits.
Grading Basis: Letter Grade

PHYS 1450 - Professional Development I (1 Credit)
Introduction to the physics program for all beginning physics majors or those considering the major. Discussions about career opportunities, the various physics undergraduate and graduate degree paths, research being conducted within the physics department, and strategies for being a successful and engaged physics major. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 1840 - Independent Study: PHYS (1-3 Credits)
Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

PHYS 2010 - College Physics I (4 Credits)
This is an algebra based physics course covering mechanics, heat and sound. Note: College algebra and trigonometry are strongly recommended preparation for optimal student success. Term offered: spring, summer, fall. Max Hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab; Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2020 - College Physics II (4 Credits)
This is an algebra based physics course covering electricity, magnetism, light and modern physics. Prereq: PHYS 2010 or PHYS 2311 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2.
Grading Basis: Letter Grade
Prerequisite: PHYS 2010 or PHYS 2311 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2311 - General Physics I: Calculus-Based (4 Credits)
This is a calculus based physics course covering vector displacement, uniform and accelerated motion, force, momentum, energy, rotating systems, oscillations, and an introduction to thermodynamics. Emphasis is on basic principles. Prereq: MATH 1401 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prerequisite: MATH 1401 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2321 - Intro Experimental Phys Lab I (1 Credit)
This introductory experimental physics laboratory introduces students to the methods of science through a series of experiments and exercises focused on how objects move. Students working in teams use mathematical and computational approaches to acquire data, examine data, and make conclusions about how well these data support hypotheses and models. Students will use different types of scientific communication, including graphs and other forms of data visualization and cogent written and oral evaluation of experimental findings. Term offered: spring, summer, fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2331 - General Physics II: Calculus-Based (4 Credits)
This is a calculus based physics course covering electrostatics, magnetic fields, electromagnetic waves (including light), and optics. Prereq: PHYS 2311 and MATH 2411 with a C- or higher. Term offered: spring, summer, fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2311 and MATH 2411 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lec.
Typically Offered: Fall, Spring, Summer.

PHYS 2341 - Intro Experimental Phys Lab II (1 Credit)
This introductory experimental physics laboratory introduces students to the methods of science through a series of experiments and exercises focused on electricity and magnetism. Students working in teams use mathematical and computational approaches to acquire data, examine data, and make conclusions about how well these data support hypotheses and models. Students will use different types of scientific communication, including graphs and other forms of data visualization and cogent written and oral evaluation of experimental findings. Prereq: PHYS 2321 or PHYS 2030 with a C- or higher. Term offered: spring, summer, fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2321 or PHYS 2030 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring, Summer.

PHYS 2351 - Applied Physics Lab I (1 Credit)
Introduces physics majors to several ways that fundamental concepts in mechanics intersect with useful technologies, resulting in documented technical competencies useful in research and industry. Term offered: fall, spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Fall, Spring.

PHYS 2361 - Applied Physics Lab II (1 Credit)
Introduces physics majors to several ways that fundamental concepts in electrodynamics and optics intersect with useful technologies, resulting in documented technical competencies useful in research and industry. Prereq: PHYS 2351 with a C- or higher. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2351 with a C- or higher.
Additional Information: Denver Core Requirement, Biol Phys Sci - Lab.
Typically Offered: Spring.

PHYS 2711 - Vibrations and Waves (3 Credits)
Introduces vibrations and waves associated with physical phenomena. Analytic and numerical methods in physical contexts. Topics include harmonic oscillators, resonance, coupled oscillators, nonlinear oscillators, waves in elastic media, sound waves, pulses and dispersion. Prereq: PHYS 2331 and MATH 2411 with a C- or higher. Term offered: typically offered spring only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2331 and MATH 2411 with a C- or higher.
Typically Offered: Spring.

PHYS 2811 - Modern Physics I (3 Credits)
Presents a study of the events and discoveries that occurred during the latter part of the 19th and the first part of the 20th centuries which led to the discovery of quantum mechanics; namely, special relativity, particle nature of radiation, wave properties of particles, models of the atom, and the introduction of quantum mechanics. Prereq: PHYS 2331 and MATH 2411 with a C- or higher. Term offered: typically offered in spring only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 2331 and MATH 2411 with a C- or higher.
Typically Offered: Spring.

PHYS 2840 - Independent Study: PHYS (1-3 Credits)
Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

PHYS 2880 - Directed Research (1-3 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: 15 hours of 2.75 GPA. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

PHYS 3050 - General Astronomy II (3 Credits)
Evolution of our sun and other stars is studied, as well as the methods used to gain the information. Discussion includes objects such as neutron stars, novae and supernovae, and black holes. Large-scale structures, including clusters and galaxies, are studied. Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311
Typically Offered: Fall.

PHYS 3070 - Physical Cosmology (3 Credits)
Designed for science and engineering maj, stud. in quantitative fields/ w req math skills interested in physical universe. Covers large-scale structure of universe &its evolution from birth well into future.Gravitational concepts, neutron stars, black holes, big bang univ, cosmological tests, dark matter& energy. Problem solving emphasized. Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311 or permission. Note: This course assumes that students have completed PHYS 2010 or PHYS 2311 prior to taking this course. Note: Routine knowledge of algebra, geometry and trigonometry is assumed. Knowledge of trig and calculus also useful. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 1052 or PHYS 2010 or PHYS 2311
Typically Offered: Spring.

PHYS 3082 - Energy and the Environment (3 Credits)
For students of various backgrounds who wish to increase their understanding of the environmental and technical issues of supplying the energy demands of our society. Alternative energy sources and conservation are explored as solutions to promote sustainable society. Note: One college-level science course and MATH 1110 or equivalent are strongly recommended as preparation for optimal student success. Cross-listed with ENVS 3082. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3120 - Methods of Mathematical Physics (3 Credits)
Typically covers calculus of variations, special functions, partial differential equations, integral transforms, linear vector spaces, and tensor analysis. Prereq: MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Pre: MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher.
Typically Offered: Fall.

PHYS 3151 - Biophysics Outlook I (1 Credit)
Designed as a companion to General Biology I (but can take stand-alone), this course explores how biophysics concepts and experimental methods add to the knowledge of life's processes at the molecular and cellular level. Note: PHYS 2010 and 2020 strongly recommended for optimal student success. Term offered: fall. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3161 - Biophysics Outlook II (1 Credit)
Designed as a companion to General Biology I (but can take stand-alone), this course explores how biophysics concepts and experimental methods contribute to the understanding of the structure and function of plants, animals & ecological systems. Note: PHYS 2010 and PHYS 2020 strongly recommended for optimal student success. Term offered: spring. Max Hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Spring.

PHYS 3211 - Analytical Mechanics (4 Credits)
Topics include the Lagrange and Hamiltonian formulations, the two-body problem, rigid body motion, and small oscillations. Prereq: PHYS 2711, MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Coreq: PHYS 3120. Term offered: fall. Max hours: 4 Credits.
Grading Basis: Letter Grade
Pre-req: PHYS 2711, MATH 2421 and either MATH 3195 or MATH 3191 and MATH 3200 with a C-or higher. Co-req PHYS 3120.
Typically Offered: Fall.

PHYS 3251 - Biophysics of the Body (4 Credits)
Fundamental ideas of anatomy, physiology, and biomechanics from the viewpoint of physics. Biological topics covered include: skeletal systems, muscular systems, circulatory systems, and human motion. Analytical mechanics topics include: Newtonian mechanics, harmonic motion, energy conservation, and introductory fluid dynamics. Prereq: PHYS 2711, 3161, MATH 2421 and 3195 or equivalent or permission of instructor. Term offered: infrequent. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2711, 3161, MATH 2421 and 3195

PHYS 3252 - Biophysics of the Body NM (4 Credits)
Fundamental ideas of anatomy, physiology, and biomechanics from the viewpoint of physics. Biological topics covered include: skeletal systems, muscular systems, circulatory systems, and human motion. Analytical mechanics topics include: newtonian mechanics, harmonic motion, energy conservation, and introductory fluid dynamics. Prereq: PHYS 2010 and PHYS 2020. Term offered: infrequently. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2010 and PHYS 2020

PHYS 3411 - Thermal Physics (3 Credits)
Covers the basic concepts of the three related disciplines of thermodynamics, statistical mechanics, and kinetic theory. Prereq: PHYS 2331, PHYS 2811 and MATH 2421 with a C- or higher; Prereq or Coreq: MATH 3195 or MATH 3191 and MATH 3200 with a C- or higher if completed prior to PHYS 3411. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Prereq: PHYS 2331, 2811 and MATH 2421 with a C- or higher; Pre or Coreq: MATH 3195 or (MATH 3191 and MATH 3200) with a C- or higher.
Typically Offered: Spring.

PHYS 3450 - Professional Development II (1 Credit)
Continuation of professional preparation for careers and graduate school. Students will conduct career-related research and engage in classroom discussions. Students will also examine their resume and transcript to create individualize action plans to bridge the gap between their current skills and those desired by employers and graduate schools. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3451 - Biophysics of the Cell (4 Credits)
Fundamentals of cellular biology from the viewpoint of physics. Biological topics covered include: the central dogma of molecular biology, cellular signaling, genetic regulation, molecular crowding, and ion channels. Statistical and thermal physics topics include: statistics, probability, thermodynamics, heat, and entropy. Prereq: PHYS 2811, 3151 and MATH 2421 or permission of instructor. Coreq: MATH 3195. Term offered: on demand. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2811, 3151 and MATH 2421 Coreq: MATH 3195

PHYS 3452 - Biophysics of the Cell NM (4 Credits)
Fundamentals of cellular biology from the viewpoint of physics. Biological topics covered include: the central dogma of molecular biology, cellular signaling, genetic regulation, molecular crowding, and ion channels. Statistical and thermal physics topics include: statistics, probability, thermodynamics, heat, and entropy. Prereq: PHYS 2020, 2040 and 3151 or permission of instructor. Term offered: infrequent. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2020, 2040 and 3151

PHYS 3620 - Sound and Music (3 Credits)
Considers the basic nature of sound waves, the ear and hearing, and musical instruments. Although this course is mainly descriptive, some high school algebra will be used. Term offered: typically offered fall only. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PHYS 3711 - Advanced Experimental Physics Laboratory (2 Credits)
An advanced lab in which students select and explore the ideas and laboratory methods of major professional areas of physics: classical mechanics & nonlinear dynamics, electrodynamics, thermal physics, fundamental quantum behavior, nuclear and elementary particle physics, atomic and molecular physics, optics and photonics, condensed matter physics, fluid dynamics, acoustics, plasma physics, and astrophysics as well as interdisciplinary topics. Note: Must be taken twice by students majoring in physics. Prereq: PHYS 2711 or 2811 with a C- or higher or permission of instructor. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better.
Typically Offered: Fall, Spring.

PHYS 3751 - Physics Capstone Proposal (1 Credit)
Provides opportunity for physics majors to prepare a written proposal in preparation for senior thesis research or a senior project. Emphasis placed on describing the problem, methodology, equipment, and data analysis needed to successfully complete the research or project. Completed proposals are submitted to each student's potential research or project advisor for review and approval. Note: Required for all students majoring in physics. Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better. Term offered: spring. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2711 or PHYS 2811 with a grade of C- or better.
Typically Offered: Fall, Spring.

PHYS 3840 - Independent Study: PHYS (1-3 Credits)
Note: Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PHYS 3880 - Directed Research (1-3 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher and at least a 2.75 cumulative GPA. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

PHYS 4211 - Quantum Mechanics (3 Credits)
A course in which both wave and matrix mechanics are developed and applied to selected problems in atomic physics. Prereq: PHYS 2811 and 3211 with a C- or higher. Co-req: PHYS 4212. Term Typically Offered: Fall. Cross-listed with PHYS 5211. Max hours: 3 credits
Grading Basis: Letter Grade
Prereq: PHYS 2811 and 3211 with a C- or higher. Coreq: PHYS 4212.
Typically Offered: Fall.

PHYS 4212 - Quantum Mechanics Seminar (1 Credit)
This course involves supplemental discussion and guided extension of course content presented in PHYS4211 Quantum Mechanics through the use of one or more of the following: Interactive Tutorials, Collaborative Problem Solving, Computation, and Hands-on Activities. Co-req: PHYS 4211. Term Typically Offered: Fall. Max hours: 3 credits
Grading Basis: Letter Grade
Co-req: PHYS 4211
Typically Offered: Fall.

PHYS 4251 - Physical Fluid Dynamics (3 Credits)
Fundamental concepts and methods in fluid dynamics are developed through basic laws, the Navier-Stokes equation, viscous fluid flow, dimensional analysis, vorticity, boundary layers, linear stability and turbulent flow. Cross-listed with PHYS 5251. Prereq: Restricted to students who have completed PHYS 2311, PHYS 2331 and PHYS 3120 with a C- or higher or with instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restricted to students who have completed PHYS 2311, PHYS 2331 and PHYS 3120 with a C- or higher or with instructor permission.

PHYS 4311 - Electricity & Magnetism (3 Credits)
Elements of mathematical theory of electricity and magnetism, including electrostatics, magnetostatics, polarized media, direct and alternating current theory, and introduction to electromagnetic fields and waves. Pre-req: PHYS 2331 and PHYS 3120 with a C- or higher. Co-req: PHYS 4312. Term Typically Offered: Spring. Cross-listed with PHYS 5311. Max hours: 3 credits.
Grading Basis: Letter Grade
Pre-req: PHYS 2331 and PHYS 3120 with a C- or higher. Co-req: PHYS 4312.
Typically Offered: Spring.

PHYS 4312 - Electricity & Magnetism Seminar (1 Credit)
This course involves supplemental discussion and guided extension of course content presented in PHYS 4311 Electricity& Magnetism through the use of one or more of the following: Interactive Tutorials, Collaborative Problem Solving, Computation, and Hands-on Activities. Co-req: PHYS 4311. Term Typically Offered: Spring. Max hours: 1 credit
Grading Basis: Letter Grade
Co-req of PHYS 4311
Typically Offered: Spring.

PHYS 4351 - Bioelectromagnetism (4 Credits)
The fundamental theory of electric and magnetic fields is developed and applied to problems of biology and medicine. Examples in medical diagnostics and treatment are built upon rigorous application of Maxwell's equations and constitutive models of electromagnetic properties of biomaterials. Prereq: PHYS 2331 and 3120 or permission of instructor. Cross-listed with PHYS 5351. Term offered: spring infrequently. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331 and 3120
Typically Offered: Spring.

PHYS 4352 - Bioelectromagnetism NM (4 Credits)
This course is the non-majors' companion to PHYS 4351/5351 (taught simultaneously) using modeling approaches accessible to the general science student. Prereq: PHYS 2010, 2020 and MATH 1401 or permission of instructor. Cross-listed with PHYS 5352. Term offered: spring. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2010, 2020 and MATH 1401
Typically Offered: Spring.

PHYS 4400 - Scientific Instrumentation (3 Credits)
Conceptual and practical knowledge needed to design scientific instruments, develop technical products, and use special laboratory procedures to research. Topics include materials, mechanisms, electronics, and optics. Note: Two semesters of 2000-level introductory physics strongly recommended for optimal student success. Cross-listed with PHYS 5400. Repeatable. Term offered: infrequent. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHYS 4401 - Special Topics (1-3 Credits)
Repeatable.Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PHYS 4450 - Professional Development III (1 Credit)
Continuation of professional preparation for careers and graduate school. This seminar provides opportunities for students to reflect upon connections between the physics major, the core curriculum, and other learning experiences while a student. Students will develop a written reflection on their undergraduate experiences. Students will also learn how to locate and apply to open job positions and graduate school programs. Prereq: PHYS 3450 with a C- or higher. Term offered: fall. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 3450 with a C- or higher.
Typically Offered: Fall.

PHYS 4510 - Optics (3 Credits)
Presents a contemporary treatment of selected topics in optics, such as matrix methods in geometrical optics, the Fourier analysis approach to physical optics, and interaction of light with matter. Prereq: PHYS 2331, 2811 and 3120 with a C- or higher. Infrequently Offered. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2331, 2811 and 3120 with a C- or higher.
Typically Offered: Spring.

PHYS 4550 - Astrophysics (3 Credits)
Covers stellar astrophysics, solar physics, star formations, stellar evolution, processes in the interstellar medium, galactic dynamics and evolution, formation of galaxies and cosmology. Note: MATH 3195; PHYS 2821 and 3050 are strongly recommended preparation for optimal student success. Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4611 - Computational Physics (3 Credits)
Designed to provide an understanding of the role of the computer in modern theoretical physics by studying the simulation of physical phenomena in various fields of physics. Prereq: PHYS 3120. Note: Students will not earn credit for PHYS 4611, if they have already earned credit for PHYS 4610. Infrequently Offered. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PHYS 3120

PHYS 4620 - Computational Physics II (2 Credits)
Assigns the student to an individual, advanced-level project modeling a physical phenomenon on the computer. Prereq: PHYS 4611 with a C- or higher. Infrequently Offered. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 4611 with a C- or higher.

PHYS 4650 - Solid State Physics (3 Credits)
Covers the basic thermal and electrical properties of solids which are explained in terms of the Brillouin zone structures of phonons and electrons. Prereq: PHYS 3411 and PHYS 3811 with a C- or higher. Infrequently Offered. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3411 and PHYS 3811 with a C- or higher.

PHYS 4678 - Quantum Computing (3 Credits)
The course teaches students the principles, the algorithms and the programming methods of quantum computing, and also discusses the associated physics and mathematics background required. Other related topics such as quantum communication and quantum entanglement will also be discussed. Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher. Term Typically Offered: Spring. Cross-listed with PHYS 5678, ELEC 4678, and ELEC 5678. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher.
Typically Offered: Spring.

PHYS 4679 - Quantum Computing Algorithms (3 Credits)
The course discusses several seminal quantum algorithms, including the quantum Fourier transforms, Grover's and Shor's algorithms, followed by explaining several advanced quantum computing algorithms, including quantum error correction, sparse linear systems , and variational eigensolver. Google Cirq quantum programming library will be used for actual quantum programming implementations of the algorithms discussed. Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher. Cross-listed with PHYS 5679, ELEC 4679, and ELEC 5679. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3120 or PHYS 3211 or PHYS 3411 with a C- or higher.
Typically Offered: Fall.

PHYS 4680 - Quantum Computing Technology (3 Credits)
Students will explore some of the concepts and experimental practices for realizing quantum computers. They will engage in laboratory practice of relevant skills including high-performance analog electronics; optics-based quantum encryption and eraser implementations; RF electronics; and vacuum and cryogenic techniques. Prereq: PHYS 4711 with a C- or higher. Cross-listed with PHYS 5680, ELEC 4680, and ELEC 5680. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 4711 with a C- or higher.

PHYS 4681 - Quantum Technology Systems (3 Credits)
Students will explore a systems approach toward experimental practices for realizing quantum information science and engineering (QISE), with a focus on vacuum and cryogenic techniques and integration of electronics subsystems into a "dry" cryostat. They will engage in laboratory practice of relevant skills including creation and measurement of high vacuum, methods for reaching ultra-low temperatures, concerns in the design and construction of cryogenic apparatuses, and operation of a "dry" cryogenic system at 4 K, including measurements on superconducting quantum interference devices. Cross-listed with PHYS 5681, ELEC 4681 and ELEC 5681. Max hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4711 - Physics Capstone Project (2 Credits)
A one-semester intensive physics capstone project in experimental or computational physics. Projects may include (A) development of a new or enhanced experiment for PHYS 3711, (B) further independent investigation in one of the fundamental areas of physics, or (C) development of a technical innovation for society and industry. Prereq: PHYS 3751 with a C- or higher or permission of instructor. Term offered: spring, fall. Max hours: 2 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3751 with a C- or higher.
Typically Offered: Fall, Spring.

PHYS 4751 - Physics Capstone Thesis (1 Credit)
A two semester capstone experience in which students prepare, summarize, present their own research in physics in a formal written thesis. Must be taken twice by physics majors who choose this option. Students must also complete a minimum of 135 hours of research through completion of 3 credits of PHYS 4880 Directed Research or a research internship or other documented evidence of research efforts. Prereq: PHYS 3751 with a C- or higher or permission of instructor. Repeatable. Term offered: fall, spring. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PHYS 3751 with a C- or higher.
Typically Offered: Fall, Spring.

PHYS 4810 - Atomic and Molecular Structure (3 Credits)
A course in which quantum mechanical methods are applied to problems in atomic and molecular physics, such as the one-electron atom, atomic and molecular spectra, and particle scattering. Prereq: PHYS 3811 with a C- or higher. Infrequently Offered. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 3811 with a C- or higher.

PHYS 4820 - Subatomic Physics (3 Credits)
Introductory treatment of the various concepts and models used to describe nuclear and high energy particle phenomena. Prereq: PHYS 2811 with a C- or higher. Term offered: spring, infrequent. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PHYS 2811 with a C- or higher.
Typically Offered: Spring.

PHYS 4840 - Independent Study: PHYS (1-3 Credits)
Note: Students must check with a faculty member before taking this course. Repeatable. Term offered: spring, summer, fall infrequently. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PHYS 4850 - Physics for Design and Innovation I (3 Credits)
A service-learning project using fundamental physical principles to design a prototype scientific instrument, technical device, or technical process for a real-world client. Includes instruction on project management, intellectual property, and market analysis. Cross-listed with PHYS 5850. Repeatable. Term offered: infrequent. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PHYS 4852 - Physics for Design and Innovation II (3 Credits)
A capstone project using fundamental physical principles to prototype a scientific instrument, technical device or technical process. The focus is on the student's own product idea. Includes online guided readings on the wider context of product development. Students should consult with instructor on necessary physics and mathematics preparation for the project. Prereq: PHYS 4850 with a grade of C- or higher. Cross-listed with PHYS 5852. Repeatable. Term offered: infrequent. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PHYS 4850 with a C- or higher.

PHYS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Term offered: spring, summer, fall. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PHYS 4920 - Advanced Undergraduate Seminar (1 Credit)
Studies a focused topic such as: size and age of the universe, critical phenomena, non-linear optics, energy, fiber-optic communications, among others. Students research these topics and give a seminar outlining their findings. Prereq: PHYS 2811 with a C- or higher. Infrequently Offered. Max hours: 1 Credit.
Grading Basis: Letter Grade
Prereq: PHYS 2811 with a C- or higher.

PHYS 4921 - Senior Seminar (1 Credit)
Grading Basis: Letter Grade

PHYS 4939 - Internship (1-3 Credits)
Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Term offered: spring, summer, fall infrequently. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring, Summer.

PHYS 4950 - General Relativity (3 Credits)
This course will introduce classical general relativity, a generalized theory of gravity that reduces to Newtonian gravity is the weak gravity limit. This course covers the basic principles of Einstein's general theory of relativity, differential geometry, experimental tests of general relativity, black holes, and cosmology. Since this course will emphasize both analytic calculation and physical understanding of classical gravity and is a 3 credit hour senior-level physics course, it can be very challenging, especially if taken with other physics courses. A good rule of thumb for a college course of this type is to expect to spend a minimum of 2 to 4 times the amount of time outside of class as you do in class. For this course, that means a minimum of 6 to 12 hours per week outside of class. Term offered: infrequent. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PHYS 4980 - Advanced Physics Topics (1-3 Credits)
Covers a particular topic, as announced in the 'Schedule Planner.' Note: May be taken more than once for credit in different topics. Prereq: PHYS 2811 with a C- or higher. Repeatable. Term offered: spring, fall. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: PHYS 2811 with a C- or higher.
Typically Offered: Fall, Spring.

Political Science (PSCI)

PSCI 1001 - Introduction to Political Science: The Quest for Freedom and Justice (3 Credits)
Introduces the study of politics, its human importance, and its relationship to social institutions. Analysis of the relationship between individual political behavior and characteristics of the political system. Development of key concepts such as power, legitimacy, authority, political socialization, and revolution. Note: Required of all PSCI majors. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall, Spring, Summer.

PSCI 1101 - American Political System (3 Credits)
General introduction to the American political system with emphasis on the U.S. Constitution, federalism and separation of powers. Current affairs and enduring questions of American Political life. Is America exceptional? How and why do political parties do battle? Can the U.S. system achieve social justice? Note: Courses offered through CU Succeed will also examine the Colorado Constitution and Colorado Supreme Court case studies. Required of all PSCI majors. Max hours:3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.

PSCI 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PSCI 2001 - Topics in Political Science (1-3 Credits)
Covers different areas of politics. Note: May be taken more than once for credit when topics vary. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PSCI 2006 - Global Political Issues (3 Credits)
Studies global political issues, exploring the broad forces at play in the world: international economics, national interests, military power, nationalism, ethnicity, the environment and human rights. Discussion of world events and underlying global issues, incorporating analytical tools used by political scientists. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2011 - Logic of Political Inquiry (3 Credits)
This course builds critical thinking techniques, logical habits of mind, and research skills necessary for political study. Includes argumentation basics, logical fallacies, evaluating evidence, understanding statistics, effective writing, and internet research. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

PSCI 2365 - Politics of Climate Change (3 Credits)
This course shows how Political Science addresses today's most severe threat to our planet. It analyzes how societies try to mitigate and adapt to climate change at various governance levels. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2410 - Political Science through Science Fiction (3 Credits)
Explore political science concepts by analyzing works of science fiction. Course examines utopian and dystopian communities, imagined futures, and political theorizing in both classic and unusual works of fiction. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 2840 - Independent Study (1-3 Credits)
An opportunity for lower division students who demonstrate academic potential to pursue the study of some subject of interest in greater detail, with supervision from a faculty member in the department. Subjects chosen and arrangements for assignments to be made between student and faculty. Prereq: One semester of course work at Downtown Denver Campus. Department consent required. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSCI 3000 - Topics: Conference Participation (1 Credit)
Max hours: 1 Credit.
Grading Basis: Letter Grade

PSCI 3002 - Topics in Political Science (1-3 Credits)
Covers different areas of politics. Note: May be taken more than once for credit when topics vary. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PSCI 3011 - Research Methods (3 Credits)
Design of political/social research, both qualitative and quantitative. Applications of statistical techniques and procedures to social and political phenomena. Use of computer and the Internet. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3022 - Political Systems of the World (3 Credits)
The class focuses on the analyses of various political systems around the world. Students will look at democracies and dictatorships, industrialized countries and developing countries. Though a structured comparison, students will assess and test key theories in Political Science. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

PSCI 3034 - Race, Gender, Law and Public Policy (3 Credits)
Historical overview of race and gender relations in the U.S. and an examination of the treatment of issues of race and gender in the judicial system and public policy. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

PSCI 3035 - Political Movements: Race and Gender (3 Credits)
Examines the emergence, growth, and decline of social movements for race and gender equality. Discussion of political issues of race and gender in the 1990s. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring.

PSCI 3042 - World Politics (3 Credits)
This course provides a basic background and theories of international relations with a focus on the interactions between states, international organizations, nongovernmental organizations, media sources, and multinational corporations. Themes examined include foreign policy, international security, political economy, human rights, international law, sustainable development, and environmental management. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

PSCI 3050 - Islamophobia (3 Credits)
Islamophobia depicts Islam and its followers as threats to civilization, human rights and progress. Course examines historical and current Islamophobia, including impacts on international relations and on domestic politics. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3064 - Power and Empowerment in the United States (3 Credits)
Introduces U.S. political economy. Analysis of the political and economic forces and structures that shape the opportunities available to the American people. Among topics included are reciprocal impacts of government and business, the federal budget, taxation, lobbying and special interests, community organizing, and elections. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3214 - Federal Law and American Indians (3 Credits)
Examines the legal and political history of the U.S. in relation to American Indian Nations. Focuses on specific laws and Supreme Court cases in federal Indian law, with analysis of U.S. policy. There will be some comparison with Indian policies of other countries. Cross-listed with ETST 3216. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3347 - Film and Politics (3 Credits)
Presents historical and contemporary films to introduce students to critical evaluation of film as a political medium. Whether designed as propaganda or entertainment, films shape and reflect critical issues in our political and social culture. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3840 - Independent Study: PSCI (1-3 Credits)
Department consent required. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 3914 - The Urban Citizen (3 Credits)
Course emphasis is community, the individual, and the good life. Experiential learning and classroom discussions about capacities of urban citizens. Focus is on social, political, and economic resources that individuals command, issues of equality and inequality, and possibilities of constructive change. Prereq: A willingness to spend a semester working and studying together as a team in both the classroom and the community. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 3939 - Internship (1-9 Credits)
Designed experiences involving application of political concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing or higher. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

PSCI 4001 - Theories of Capitalism (3 Credits)
Is capitalism “the legitimate racket of the ruling class”, as Al Capone argued? Is it the “system under which greed does the least harm”, as Milton Friedman suggested? Or, is it as John Keynes had it, “the astounding belief that the most wickedest of men will do the most wickedest of things for the greatest good of everyone”? This advanced undergraduate/graduate course in theories of political economy engages ideas, concepts, actors, institutions, relationships, dynamics, and structures central to a deep understanding of global industrial capitalism. The course is centered on the works of seminal theorists of capitalism from the 18th century forward, including Adam Smith, David Ricardo, Alexander Hamilton, Friedrich List, Karl Marx, CLR James, Harry Magdoff, Friedrich Hayek, Martin Luther King, Jr., Kwame Nkrumah, Jeff Sachs, Amartya Sen, and Vandana Shiva. Students in the course are provided ample opportunities, across a variety of innovative assignments, to explore the historical and social context of the theoretical perspectives presented, to compare these perspectives to one another, and to make substantive connections between theory and practice. Note: Students are not expected to have any prior coursework in political science. Students are expected to make progress in developing their reading, writing, analytical and critical thinking skills. Cross-listed with PSCI 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PSCI 4002 - Topics in Political Science (3 Credits)
Specialized areas of politics. Note: May be taken more than once for credit when topics vary. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PSCI 4009 - Politics of the Budgetary Process (3 Credits)
Develops each student's understanding of budgeting and financial management in the public and nonprofit sectors. An overview of public sector and nonprofit fiscal management is provided, along with thorough exploration of the political influences that affect financial decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4011 - GIS in Political Science (3 Credits)
Computer lab course developing methodological skills in Geographic Information Systems (GIS) in political contexts. Geospatial computerized mapping skills are important in political fields such as urban planning, electoral analysis, environmental justice, demographics, public health, and criminal justice. Designed for beginners. Cross-listed with PSCI 5011. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4014 - Media and Politics (3 Credits)
Explores the impact of the news media on the American political system, including public policy and citizen participation, and addresses trends in news coverage and media ownership, and their impact on public opinion. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4024 - State Politics: Focus Colorado (3 Credits)
Examination of American state politics, with an emphasis on Colorado. Course examines the special role of state governments in the American federal system. Focus on dominant current issues facing Colorado state government. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Summer.

PSCI 4025 - Local Governance and Globalization (3 Credits)
Introduces international political economy, consequences of globalization for localities, interplay between wealth and power among nations, multinational corporations, NGOs and the UN, and impact of their actions on local governments. Topics include development, aid, trade, outsourcing, eco-sustainability and global equity. Cross-listed with PSCI 5025. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4034 - Political Parties and Pressure Groups (3 Credits)
Democrats, Republicans, third parties, and pressure groups in the United States. Analysis of pressure politics and political behavior. Impact of parties and pressure groups on the public good. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4044 - The Presidency (3 Credits)
An overview of the historical, constitutional, and functional aspects of the presidency. Focuses on the powers and vulnerabilities of the presidency and on the style and politics of the current president. Cross-listed with PSCI 5044. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4057 - Religion and Politics (3 Credits)
Exploration of: (1) theoretical perspectives on the relationship between religion and politics; (2) causes of and justifications for the historical development of the Western separation of "church and state;" (3) contemporary responses to and analyses of this separation; and (4) several current debates about public policy in America that reveal tensions between these two spheres. Cross-listed with PSCI 5057 and RLST 4500, 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4074 - Urban Politics, Planning, and Development (3 Credits)
For the first time in world history, humanity has passed a watershed moment as the majority of all the world's people now reside in cities, rather than rural areas. Most of the world's GDP is generated in cities, but cities also consume most of the world's resources. Technological invention and cultural innovation flourish in cities, but so too does crime and anomie. In cities, profound economic and ideological struggles over competitive neoliberalism and the sharing social economy play out in spatial struggles over the shape and use of the urban places we move through daily. Can vast and growing cities be sustainable, healthy, and just? Field tours through changing Denver neighborhoods provide case-study insights. Cross-listed with PSCI 5094. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4075 - Gentrification and Social Equity (3 Credits)
Study causes and consequences of urban gentrification, and explore strategies of grassroots resistance and social equity solutions that are being mobilized to challenge the forces of gentrification. Contrast common celebrations of the waves of capital reinvestment that are fueling urban revitalization with the frequent claim of many low-income neighborhoods: "Gentrification is Class War!" Cross-listed with PSCI 5075. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4084 - Local Government and Administration (3 Credits)
Policy and administrative challenges faced by local government in the 21st century. Emphasis on cities under federalism, alternative forms of city governance, and new challenges from increasingly diverse constituents. Issues of poverty, public safety, health, transportation, environment, corruption, and accountability. Cross-listed with PSCI 5084. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4085 - Comparative Governance: Environment and Society (3 Credits)
Focuses on how public & private actors at various levels of governance address pressing social & environmental issues such as aging societies, drug abuse, air pollution & global warming. Students will learn to analyze the dynamics of conflict & cooperation, using main concepts and theories of governance literature. Cross-listed with PSCI 5085. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4094 - Seminar: American Politics (3 Credits)
Foundations of U.S. politics and contemporary political issues. Federal/state/community relations. Relationship among the three branches of the Federal government. Colorado controversies arising under the U.S. Constitution. Cross-listed with PSCI 5014. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4105 - Comparative Politics: Europe (3 Credits)
An intensive and comparative analysis of the political systems and processes of Europe. Emphasis on political culture and economy; executive-legislative relationships; electoral systems; political parties and interest groups; political conflict and citizen participation; and the impact of social changes on political institutions. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5105. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4115 - Third World Politics (3 Credits)
Examines the factors challenging political stability in low income nations and the prospects for democracy and economic development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4124 - Denver Politics (3 Credits)
Surveys Denver's dominant political and economic forces and community agendas that compete with the downtown growth machine. Examines urban renewal strategies, gentrification and grass-roots resistance, and the role of officials in shaping Denver's distribution of wealth and life-opportunities. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4126 - Politics, Power, and Profit (3 Credits)
A short introduction to international political economy, mixing theory and practice to explore states, markets, power, profit, and policy around the world. The course combines classic texts with case studies and current events, providing broad exposure to key issues and debates in the field. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4144 - Indigenous Political Systems (3 Credits)
Surveys political theory and practice in indigenous societies in the Americas. Examines the impact of indigenous political thought on Euro-American politics, especially the U.S. Constitution, and explores the contemporary impact of indigenous people on current politics. Cross-listed with ETST 4144. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4146 - Indigenous Politics (3 Credits)
Surveys the status of the world's native peoples and nations, and the role of law and politics in the future of indigenous peoples in the global arena. Examines questions of human rights, economic development, and international law and politics. Cross-listed with PSCI 5145 and ETST 4146. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4150 - Gender Politics in the Middle East: Beyond Orientalism & Islamism (3 Credits)
This course is about Middle Eastern women's subjectivity and various forms of agency. It explores the nexus of domestic, regional and international forces that shapes the lives of Middle Eastern women, in particular in the Algerian, Egyptian, Iranian, Israeli and Palestinian contexts. Far from being silent observers of the contests among these forces, as is often assumed, Middle Eastern women have been active actors in the public arena since the 19th century colonial encounter and the importation of the modern state to the region using an array of means to make their voices heard. Theirs were often more militant than those of their countrymen. The course is divided into two parts. The first part provides an overview of the theoretical notions discussed such as Orientalism, agency, colonialism and post-colonialism. Related to this theoretical section is a historical overview that is necessary to the understanding of the contemporary conditions of Middle Eastern women and the continuities and changes between past and present. The second part covers pressing topics in the lives of Middle Eastern women in the post-independence era such as the rise of Political Islam, the global trend of democratization, war and occupation. The emphasis in this section is on women as active participants in the debates surrounding these issues, rather than as objects of them. The readings assigned include both texts written by scholars from the region and by others from without. They provide analyses of the contexts within which Middle Eastern women's struggles take place. In addition, students will be exposed to materials produced by Middle Eastern women activists that express their own opinions and views in order to avoid misrepresentation and to reflect the diversity among them. Cross-listed with WGST 4150. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4155 - Political Systems of the Middle East and North Africa (3 Credits)
Comparative analysis of political processes in the Middle East and North Africa. Islamic political theory and its contemporary manifestations. The role of nationalism and the quest for modernity in the political development of this region. Parties and programmed modernization in transitional politics. Violent and nonviolent change. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4156 - The Arab-Israeli Peace Process (3 Credits)
Critical analysis of Arab and Israeli perspectives on the on-going peace negotiations in the Middle East. Historical background and religious-cultural aspects of current problems. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with ETST 4156. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4165 - Islamic Politics and Culture (3 Credits)
Comprehensive, in-depth study of Islam and Muslims. Islam is viewed as a "way of life" with social, economic, psychological, spiritual, and political implications. Among topics to be examined are: women in Islam, Jihad, fundamentalism, Islamic movements, Islam and the West. Cross-listed with RLST 3100. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4176 - Civil Resistance in Theory and Practice (3 Credits)
This course assesses forms of civil resistance against political oppression. The focus is on the struggle of non-violent resistance movements. Students will learn about the origins, successes, tactics, and strategies of civil resistance groups. Cross-listed with PSCI 5176. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4185 - Corruption in the U.S. and Abroad (3 Credits)
Explores the causes and consequences of administrative and political corruption in developed and developing countries, and evaluates various anti-corruption strategies. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4186 - East Asia in World Affairs (3 Credits)
Political and economic systems and foreign policies of East Asian powers, such as China, Japan, Taiwan, South Korea and Hong Kong; interactions of these powers and their collective economic and political roles in world affairs; major theoretical approaches to the study of East Asian powers. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PSCI 4195 - Political Systems of Sub-Saharan Africa (3 Credits)
Analysis of major types of political systems in sub-Saharan Africa and intensive case studies of selected countries exemplifying each type. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4206 - Social Movements, Democracy and Global Politics (3 Credits)
Examines global social movements as new political actors within world politics; how theoretical perspectives in international relations and democracy address these actors; and the forms of interaction among these actors, states, and global governance institutions. Cross-listed with PSCI 5206. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4207 - Theories of Social and Political Change (3 Credits)
Investigation of social and political power with respect to possibilities of change. Location of present barriers to change within ongoing histories of marginalization, exclusion, and violence. Critical examination of political inclusion and recognition. Imaginations and pursuits of just, equitable, and/or Utopian worlds. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4215 - Women's Rights, Human Rights: Global Perspectives (3 Credits)
Explores the global feminist movement's campaign to "engender" human rights. Examination of women's human-rights issues and the critique of this campaign as representing cultural imperialism. Note: this course assumes that students have completed at least two political science courses. Cross-listed with WGST 4215. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4216 - International Politics: Human Rights (3 Credits)
The system of nation states, concepts of national interest, goals of foreign policies, conduct of diplomacy, and the bearing of these elements on the problem of human rights. Presentation and evaluation of the solutions that have been offered for the securing of justice and the maintenance of peace. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4217 - Human Rights: Theory and Practice (3 Credits)
Explores the ideas of international human rights and the practical efforts to actualize rights in societies around the world. Students study the theories of rights and the evolution of rights in history. Cross-listed with PSCI 5217. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4224 - Dictatorships in 21st Century (3 Credits)
Analyzes and classifies political systems of non-democratic regimes. Reviews earlier and contemporary theories that explain the origins, survival and death of authoritarian regimes. Discusses the impact of dictatorial rule on domestic developments as well as on international relations. Cross-listed with PSCI 5224. PSCI 3022 recommended for student success. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4225 - Democracy and Democratization (3 Credits)
Examines the conditions under which countries turn from authoritarianism towards democracy and become stable democratic regimes. Also examines the impact of foreign and international factors on new democracies. Cross-listed with PSCI 5225. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4226 - The United Nations in World Affairs (3 Credits)
Current operation and future potential of the United Nations as a complex actor in world affairs, both expressing conflicting interests of its participants and promoting universal goals, including world peace, human rights, and environmental protection. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4235 - Politics and Markets in Latin America (3 Credits)
Explores political economic development in Latin America within the context of the world system. Includes the study of colonization, land tenure, foreign investment, authoritarianism, militarism, social and revolutionary movements, human rights and democratization. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4236 - American Foreign Policy (3 Credits)
Examines the postwar events, controversies, and most recent challenges in U.S. foreign policy. Analyses of the major sources of U.S. foreign policy, such as ideology, national interests, and national power. Attention to the pattern and process of foreign policy-making. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Teikyo.

PSCI 4237 - American National Security (3 Credits)
Examines American national security, utilizing an interdisciplinary analysis of its domestic historical development and its function in the current global context. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4240 - International Security (3 Credits)
Examines old and emerging "threats" to national security, and policy responses, from theoretical, historical and geographical perspectives. Explores challenges of ethnic conflict, weapons of mass destruction, environmental and economic security. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4245 - Populist Movements around the World (3 Credits)
Political populism is on the rise in virtually every part of the world. Populist leaders, parties and movements exert direct influence when they in are power. However, they also create pressure on centrist leaders and parties and influence politics indirectly. This course explores the phenomenon of political populism around the world. We begin by defining populism and investigate cases of populist movements in the United States, Europe, the Middle East, Latin America and Asia. After that, we will engage the literature devoted to explaining the phenomenon. The course concludes with a discussion of the effects of populism and the dangers that some forms of it pose to democracy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4248 - Gender, Development and Globalization (3 Credits)
Examining the cost and impact of globalization; not only on women and gender but economic equality, human movement and displacement, sustainable development and the environment. Highlighting the complexities of a highly interconnected world and intersectional nature of a globalized world, answering the question: Who Wins? Who Loses? Cross-listed with PSCI 5245, WGST 4248 and WGST 5248. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4265 - Social Justice And Globalization (3 Credits)
Examines issues of justice and ethical responsibility in a globalizing world. Do moral obligations of individuals and institutions end at national borders or do they encompass all human beings and extend to the environment and to future generations? Cross-listed with PSCI 5265. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4266 - International Law (3 Credits)
Investigates the body of law that regulates relations between nations and provides a framework for solving common problems and disputes between nations. Note: this course is intended for political science majors. Cross-listed with PSCI 5266. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4274 - Conflict Resolution and Public Consent Building (3 Credits)
Alternative strategies for resolving or mediating conflicts facing public or nonprofit organizations and for building public consent, with emphasis on personal, interpersonal, organizational, interest-group, cross-cultural, and roots of conflict and bases for consent. Cross-listed with PSCI 5274. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4276 - Conflicts and Rights in International Law (3 Credits)
Explores contending interpretations and practices in international law regarding issues such as the legitimacy of humanitarian intervention, efficacy of truth commissions, tensions between truth and justice in cases of genocide and war crimes, and legal changes needed to devise viable rules. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5276. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4280 - The Politics of War Law (3 Credits)
Examines international laws governing armed conflict, including human rights law. Investigates the reasons for instances of compliance and violation within this international legal regime regulating war and conflict. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4286 - International Relations: War or Peace? (3 Credits)
Presents alternative theoretical frameworks for the explanation of war and peace. Investigations of the efficacy of international law, just-war norms and the UN in preventing or containing conflict. Cross-listed with PSCI 5286. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4326 - Advanced International Political Economy: Globalization (3 Credits)
Engages the current debate about globalization. Conceptualizes globalization and evaluates the pros and cons of global trade and finance for developed and developing countries. Develops a model for a sustainable and just global economy. Prereq: PSCI 4126. Cross-listed with PSCI 5326. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PSCI 4126

PSCI 4330 - U.S. Health Policy (3 Credits)
The role of public health policy as legislated at the federal and state levels. Individual health policy (e.g. social security and managed care) and public health policy (e.g. mandatory immunizations, HIV testing, air and water quality). Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4340 - Advanced International Political Economy: Global Supply Chain (3 Credits)
Many people globally rely on long, global supply chains for jobs and incomes and to acquire the goods and services they need to survive. These chains connect people all over the world—from farmers and seamstresses to multinational corporations and investment banks — to one another as they work to bring products to our store shelves and homes. Yet, as current events clearly demonstrate, these long and complicated chains are fragile and easily disrupted, contributing to rising vulnerability, insecurity, inequality, and poverty around the world. How did it come to pass that we rely on such a complex system for the things we need? Is this kind of interdependence a good idea? What alternatives exist for restructuring trade, work, and production? These questions have occupied political economists for centuries and for good reason. Thinking about supply chains means thinking about survival and our relationships with one another and the Earth. This course tackles contemporary and historical supply chains with an eye toward thinking about the future of global production, trade, and work. Cross-listed with PSCI 5340. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4354 - Environmental Politics (3 Credits)
Political, legal, and economic forces in environmental law and policy. Special emphasis on air and water pollution and on threats to public and agricultural land. Environmental groups and their opponents. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4365 - Global Ecological Crises (3 Credits)
Overview of global ecological problems such as climate change, transboundary pollutions, and loss of bio-diversity in an attempt to understand the political, economic, and cultural forces behind these problems and the status of legal and policy initiatives to address them. Cross-listed with PSCI 5365. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4407 - Early Political Thought (3 Credits)
Main currents of political thought in their historical setting from Plato to Machiavelli, with a critical evaluation of those elements of continuing worth. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4414 - Non-Profits and Social Change (3 Credits)
Explores role of non-profits in catalyzing social change. What are obstacles and opportunities to leveraging social change through nonprofits? What factors shape non-profits to be either transformational or systemstabilizing forces? Cross-listed with PSCI 5514. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4417 - Modern Political Thought (3 Credits)
Theories of modernity and its lasting social and political consequences. Topics may include liberalism and neoliberalism, capitalism and Marxism, humanism and posthumanism, racial slavery, colonialism, and ecology. PSCI 4407 is not a prerequisite for PSCI 4417. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4427 - Law, Politics and Justice (3 Credits)
Analysis of the relationship of politics, law, and justice, particularly the degree to which moral norms and political concerns should and do influence legal standards and their perceived legitimacy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4437 - Coercion and the State (3 Credits)
An analysis of: (1) the historical emergence of the modern state; (2) the theoretical justifications for the concentration of political power and the activist state; (3) the internationalization of the European state system; and (4) anarchist and Fourth World challenges. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4444 - Contemporary Culture and Politics in America (3 Credits)
Intellectual and experiential investigation of the interplay of culture and politics in American society, as manifested in literature, social and political philosophy, psychological writings and trends, radical movements, popular culture, and daily behavior. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4446 - Advanced Indigenous Peoples' Politics (3 Credits)
Builds upon the theoretical and applied foundations of PSCI 4146. Intensive study of international legal and political developments are examined, particularly in the United Nations and the Organization of American States systems. Prereq: PSCI 4144 or PSCI 4146. Cross-listed with PSCI 5446. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: PSCI 4144 or PSCI 4146

PSCI 4457 - American Political Thought (3 Credits)
Critical examination of American political life at the intersections of social categories such as race, class, gender, sexuality, disability, and Indigeneity. Exploration of key and marginal thinkers through a variety of texts and genres. Cross-listed with PSCI 5457, ETST 4457, and ETST 5457. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4477 - Constitutional Law I (3 Credits)
Nature and scope of the following American constitutional principles as developed by the U.S. Supreme Court: federalism, jurisdiction of the federal courts, separation of powers, the taxing power, and the commerce power. Case method. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSCI 4487 - Constitutional Law II (3 Credits)
Continuation of PSCI 4477, with emphasis on the war powers of the president, citizenship, the Bill of Rights, and the Civil War amendments. (Case method.) Note: PSCI 4477 is not a prerequisite for PSCI 4487. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4494 - Judicial Politics (3 Credits)
Examines principal actors in the legal system: police, lawyers, judges, citizens. About half of this course is devoted to the study of judicial behavior, especially at the Supreme Court level. Political and personal influences on judicial behavior. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4505 - Political System of Russia and Its Neighbors (3 Credits)
The class focuses on the political values, institutions and actors of Russia and its neighboring countries, covering the political developments since the late 20th century. The relations between Russia, the European Union and the United States are also analyzed. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4535 - Labor and Working Class Politics (3 Credits)
Explores the status of the labor movement both in the U.S. and internationally, as well as the political, philosophical, and social implications of socioeconomic class status and identity. Cross-listed with PSCI 5535. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4545 - Immigration Politics (3 Credits)
Introduces students to central theories of migration and a survey of immigration law and policy in the 20th century. Highlights experiences of Mexican and Latin American immigrants and related topics, including: U.S.-Mexican foreign relations, bilingual education, undocumented immigration and globalization. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5545. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSCI 4550 - The Irish Diaspora (3 Credits)
While the population of Ireland today is roughly five million, there are an estimated 80 million people worldwide and nearly 50 million people in North America who claim some Irish identity. This course will explore this massive, nearly 5 century old, diaspora, beginning with the Plantations of Ulster and subsequent Ulster Scots emigration to North America, through the Great Hunger of the 19th century and massive exodus to the United States, Canada, Australia, and beyond. The course focus heavily on Irish immigrant communities in early Colorado, specifically Leadville, examining the history of our own community as a window into the larger political, social, and economic structures that drove such a migration. The course will conclude with an examination of the N. Ireland Peace Process, Good Friday Agreement, and BREXIT, inquiring about the role that Ireland and the Irish Diaspora plays today in global politics. Note: Students in this course will travel to parts of Colorado that once had significant Irish immigrant communities, places such as Leadville, Cripple Creek/Victor, Nevadaville, and various Catholic parishes and cemeteries in Denver. Students will also be expected to perform primary source research on Irish communities in early Colorado. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4554 - Chicano and Latino Politics (3 Credits)
Analysis of the social, cultural, and economic factors that affect political behavior of Latinos. Special attention is paid to the Mexican American cultural heritage and to relations between Mexican Americans and Anglo Americans. Cross-listed with ETST 4558. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4555 - International Women's Resistance (3 Credits)
Examines local and international struggles of women to build peace and justice by resisting systems of inequality such as colonialism, racism, patriarchy, globalization, and religious intolerance. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with PSCI 5555, ETST 4555 and WGST 4555/5555. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4564 - Gender and Politics (3 Credits)
Inter-sectional examination of the personal and political life of gender. Exploration of constructions, performances, and creative reconfiguration of gender through a variety of texts, genres, and media. Cross-listed with WGST 4564. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4605 - Politics and Governments of South Asia (3 Credits)
Studies the political systems of Bangladesh, India, Pakistan, Sri Lanka and Nepal. The impact of British rule on the development of political institutions on the subcontinent as well as problems of political development at all levels. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4615 - Politics and Government of China (3 Credits)
Political and governmental changes within China, from the 19th century to the present. Primary emphasis on contemporary political systems and sociopolitical problems. China's struggle for independence and economic development. The Chinese revolutions, Maoist communism, and the post-Maoist period. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4645 - Comparative Political Leadership (3 Credits)
Comparative study of historical, socio-cultural, and psychological bases of political leadership. Leadership types in peasant societies, empires, and revolutionary movements. Dilemmas of democratic versus authoritarian leadership in modernizing and industrial states. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4726 - Seminar on U.S. and China Relations (3 Credits)
Detailed examination of historical context and current issues in U.S./China relations. Emphasis on modern period, with particular attention to changing relations in context of rising power of China. Cross-listed with PSCI 5726. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4736 - The Middle East in World Affairs (3 Credits)
Evolution and revolution in the Middle East. The character of nationalism in the area. Analysis of inter-regional and international problems affecting the Middle East, with special emphasis on current Arab-Israeli relations. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4757 - Legal Reasoning and Writing (3 Credits)
Introduces the fundamentals of legal reasoning and legal argumentation through intensive class discussion, formal debate and writing. Attention is given to the relationship between case and statutory law and their application in trial and appeals courts in the United States. Note: this course assumes that students have completed ENGL 1020, 2030, and any 3000-level English/writing course, or COMM 3120. Cross-listed with PSCI 5747, COMM 4750, 5750. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4770 - Middle East Politics and Society in Film (3 Credits)
This course explores the intersection between politics and cinema in the Middle East. More precisely, it discusses the efforts of various international, regional, and local actors to construct meanings, mobilize support and legitimize their policies through film. Topics covered include nationalism and cinema, globalization and transnational cinema, the Arab-Israeli conflict, Political Islam and Islamic cinema. In addition to readings written by scholars from within and from outside the region, we will be analyzing American, Arab, Canadian, Iranian, and Israeli movies and documentaries that pertain to the topics covered in the course. The list of movies and documentaries watched in class will vary from year to year. Some of the movies that will be used frequently are: Lawrence of Arabia, Exodus, Argo and American Sniper. Term Offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4807 - Political Violence (3 Credits)
Investigates different types of political violence including genocide, ethnic and religious conflict, revolution, terrorism, war, state repression and others. Introduces theories of individual, collective and institutional violence, applies them to a range of case studies and explores possible solutions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4808 - Strategies of Peacebuilding (3 Credits)
The course investigates the theories and strategies of peacebuilding in societies that have endured intrastate conflict and/or massive human rights violates and asks whether peace and justice and democracy can or should work together and how forgiveness and reconciliation might develop. Cross-listed with PSCI 5808. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4827 - Women and the Law (3 Credits)
Examines the role of the courts in the development of public policy toward women; how the legal system affects the economic power, family roles, safety and political participation of women. Cross-listed with ETST 4827 and WGST 4827. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4837 - Contemporary Issues in Civil Liberties (3 Credits)
Conflicting rights of individuals and groups in several areas of civil liberties, including religious groups, free speech, sexual freedom, racial quotas, and anti-governmental actions and publications. This course includes case law, readings, guest speakers and case discussions. Cross-listed with PSCI 5837. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4840 - Independent Study: PSCI (1-3 Credits)
An opportunity for advanced students with good scholastic records, and with appropriate courses completed, to pursue independently the study of some subject of special interest to them. Subjects chosen and arrangements made to suit the needs of each student. Note: Primarily for seniors. Prereq: 15 semester hours in political science and permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PSCI 4878 - War, Film, and International Law (3 Credits)
This course examines interactions of culture, politics, and law by chronologically investigating 20th-century war movies and the ways experiences and norms have shaped and been shaped by cinematic representations. Cross-listed with PSCI 5878. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PSCI 4914 - Community Organizing and Community Development (3 Credits)
The theory and practice of community organizing strategies and community development innovations. How can social activists build power at the grassroots to build equitable, sustainable, and healthy communities? Cross-listed with PSCI 5914. Note: Students will not receive credit for this course if they have already earned credit for PSCI 3075. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4934 - CU at the Capitol (3 Credits)
Interested in building your professional experience and learning about politics first-hand with an internship as a legislative aide in the Colorado General Assembly? Each student in this course will be placed in a state government internship (students must apply for widely available positions). Working in settings such as the state capitol, legislator offices, committee hearings, and constituent meetings, students will learn first-hand about the current year legislative session of Colorado General Assembly, while networking with Colorado's political powerhouses. To supplement field experience, class meetings will allow interns to discuss current state politics and the complexities of politics as a vocation. Please note: Any student enrolling for this course must contact the course instructor immediately for assistance in landing an internship before the spring semester begins. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PSCI 4944 - CU in the City (3 Credits)
Investigation of community development strategies through seminar discussions, urban walking tours, and student field placement with a local community based organization, non-profit, or public office engaged in community development work. Cross-listed with PSCI 5944. Recommended Preparation: PSCI 3075 Community Organizing and Development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSCI 4960 - Capstone in Political Science (3 Credits)
All students in this class are near the completion of their undergraduate degree in Political Science. Congratulations on this impending achievement! This capstone course will be your opportunity to produce a sophisticated piece of work that should be one of the most demanding and impressive projects you will complete as an undergraduate--it is the capstone of your intellectual journey through your political science major. You will spend the entire semester working on this project, receiving feedback from your peers and providing feedback to them as each of you work on your respective projects. This capstone project will facilitate independent student research in Political Science and assist students in developing advanced writing and communication skills. Students will engage and enhance their critical thinking skills and will educate each other through discussions, oral presentations, and written analysis. Both independent and/or group capstone projects may be part of this course. Restriction: Students must have completed 27 credits hours in Political Science (PSCI) with a C- or higher in order to register. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Students must have completed 27 credits hours in Political Science (PSCI) with a C- or higher in order to register.
Typically Offered: Fall, Spring.

PSCI 4995 - Global Study Topics (1-3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with PSCI 5995. Term offered: summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Summer.

Pre-Nursing (PRNU)

PRNU 2939 - Internship (1-3 Credits)
Pre-Health internship offering students an opportunity to obtain hands-on experience in a clinical setting; will not apply to the Biology major. Involves application of technical concepts and skills in supervised allied health environment, such as a hospital or medical clinic. Note: May not be used as an upper-division elective. Prereq: One year of general biology with a grade of 'C' (2.0) or higher, junior standing, and a GPA of 2.75 or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PRNU 3939 - Internship (1-3 Credits)
Pre-Health internship offering students an opportunity to obtain hands-on experience in a clinical setting; will not apply to the Biology major. Involves application of technical concepts and skills in supervised allied health environment, such as a hospital or medical clinic. Note: May not be used as an upper-division elective. Prereq: One year of general biology with a grade of 'C' (2.0) or higher, junior standing, and a GPA of 2.75 or higher. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Psychology (PSYC)

PSYC 1000 - Introduction to Psychology I (3 Credits)
Introduces the scientific study of behavior, including an overview of the biological basis of behavior, sensation or perception, states of consciousness, learning and memory, thinking and language, intelligence, motivation and emotion. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

PSYC 1005 - Introduction to Psychology II (3 Credits)
Introduces the scientific study of behavior, including an overview of the history of psychology, development, personality, psychological disorders, therapy, health psychology and social behavior. PSYC 1000 is not a prerequisite for this course. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Behavioral Sciences.
Typically Offered: Fall, Spring, Summer.

PSYC 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

PSYC 2050 - Improving Memory (2 Credits)
Applies psychological principles of memory function and process to everyday settings and experiences. Covers topics such as how memory works, principles of memory improvement, and strategies for effective learning. Max hours: 2 Credits.
Grading Basis: Letter Grade

PSYC 2060 - Psychology Applied to Everyday Life (3 Credits)
A primer in psychological principles applied to everyday situations. Covers topics such as learning, stress and health, attraction and love, and personality. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 2090 - Statistics and Research Methods (4 Credits)
Introduces statistics and research methods in the field of psychology. Note: Intended for those who plan to major in psychology. Completion of college algebra or equivalent is recommended. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 2205 - Lifespan Developmental Psychology for Health Majors (3 Credits)
This course will examine the normative physical, cognitive and socio-emotional changes and milestones that occur through the human lifespan highlighting health-related issues at each stage. Prereq: PSYC 1000 or PSYC 1005 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 or 1005 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 2220 - Biological Basis of Behavior (3 Credits)
Introduces the biological basis of behavior. This course will feature concepts like neurons, synaptic and hormonal transmission, and physiological set-points. Behavior of simple (invertebrate) and complex organisms (vertebrates) will be related to the activity of specific brain neural networks. Prereq: PSYC 1000 or BIOL 2020 (BIOL 2051) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SC2
Grading Basis: Letter Grade
Prereq: PSYC 1000 or BIOL 2020 (BIOL 2051) with a C- or higher
Additional Information: Denver Core Requirement, Biol Phys Sci - No Lab; GT courses GT Pathways, GT-SC2, Nat Phy Sci:Lec w/o Req Lab.
Typically Offered: Fall, Spring, Summer.

PSYC 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have completed 15 hours of PSYC courses with a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: 15 hours of PSYC courses with a 2.75 GPA in PSYC courses

PSYC 2990 - Topics in Psychology (1-3 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

PSYC 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Max hours: 3 Credits. Cross-listed with PBHL 3050 and ECON 3050.
Grading Basis: Letter Grade

PSYC 3090 - Research Methods in Psychology (3 Credits)
Covers principles of experimental methodology in Psychology. Includes active participation in data collection and interpretation, presentation of results, evaluation of scientific literature, scientific writing and advanced statistical concepts as they relate to the field of Psychology. Prereq: PSYC 1000, 1005 and 2090 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, PSYC 1005, and PSYC 2090 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3144 - Human Cognition (3 Credits)
Studies information processing in humans, with emphasis on memory, thinking and language. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3145 - Industrial and Organizational Psychology (3 Credits)
Surveys the fields of industrial and organizational psychology. These fields apply psychological principles to improving productivity and satisfaction in the workplace. Topics include motivation, leadership, group processes, team functioning, occupational health, selection and training of employees, and performance management. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall.

PSYC 3205 - Human Development I: Child Psychology (3 Credits)
Studies human development covering birth, infancy, toddler, preschool and school-aged child. Covers biological, cognitive and social processes. Prereq: PSYC 1000 and PSYC 1005 or PSYC 3215 with a grade of C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 1005 or PSYC 3215 with a grade of C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3215 - Human Development II: Adolescence and Adulthood (3 Credits)
Study of human development from adolescence through adulthood and aging. Covers biological, cognitive, and social processes. Prereq: PSYC 1000 and PSYC 1005 or PSYC 3205. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 1005 or PSYC 3205 with a grade of C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3222 - Principles of Learning and Behavior (3 Credits)
Introduces the scientific study of learning and behavior, focusing on "Behaviorism." Principles of operant and classical conditioning are discussed. A particular emphasis is placed on the relevance and application of these principles to understanding human behavior and psychopathology. Prereq: PSYC 1000 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3235 - Human Sexuality (3 Credits)
Examines the physiological, psychological, and social psychological bases of human sexuality. Research on the range of sexual behaviors, individual sexual response, sexual development, sexual dysfunction, and variants of sexual orientation. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3254 - Introduction to Animal Behavior (3 Credits)
Surveys the behavior of nonhuman animals, emphasizing the evolution through natural selection. One semester of general biology, biological anthropology, or other course emphasizing evolutionary perspective is strongly recommended as preparation for optimal student success. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PSYC 3262 - Health Psychology (3 Credits)
An overview of the scientific study of attitudes, behaviors, and personality variables related to health and illness. Emphasis is on the interaction of biological, psychological, and social factors that cause illness and influence its treatment and prevention. Prereq: PSYC 1000 and 2220 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.

PSYC 3263 - Hormones and Behavior (3 Credits)
The hormonal regulation of behavior will be the primary focus of this course. Topics include: hormonal basis of sexual differentiation and behavioral differences, parental behavior, biological rhythms, aggression, mood and stress. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5263. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Spring.

PSYC 3264 - Exercise, Brain and Behavior (3 Credits)
This course explores the impact of physical activity status-being sedentary or physically active-on brain function and behavior. Topics include effects of exercise on cognitive function, mood disorders, stress, anxiety, sleep and drug addiction. Emphasis will be placed on understanding the neurobiological mechanisms by which exercise impacts behavior. Students who have received credit for this topic listed under PSYC 3600 may not receive credit for this course. Prereq: PSYC 1000 and PSYC 2220 with a C- or higher. Term offered: fall. Cross-listed with PSYC 5264. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3265 - Drugs, Brain and Behavior (3 Credits)
Explores the pharmacological, biological, and behavioral basis of drug effects. Topics include mechanisms of drug action, brain reward pathways, role of environment and history on drug effects, and the impact of science on drug abuse and medication development. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5265. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

PSYC 3305 - Abnormal Psychology (3 Credits)
This course applies a scientific approach to the examination of the symptoms, etiologies, and treatments of mental illnesses, including disorders of mood, anxiety, stress, addictions and those seen in childhood and older age. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 3385 - Psychology of Mindfulness (3 Credits)
This course will explore significant psychological, neurological, historical, societal and cultural aspects of mindfulness. It will integrate this current knowledge with more traditional aspects of the concept through classroom activities, guest lecturers, projects and field trips. Prereq: PSYC 1000 or 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 or 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3405 - Family Psychology (3 Credits)
Overview of theory and research pertaining to marital and family structure, functioning and dynamics. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3415 - Experimental Social Psychology (3 Credits)
Surveys the field of Social Psychology, the study of the way in which cognitions, emotions, and behaviors are influenced by the presence, or perceived presence, of others. Heavily focuses on experimentation and experimental methods within the field of Social Psychology. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3460 - Military Clinical Psychology (3 Credits)
This course focuses on clinical psychological issues facing service members, veterans, and military families. Topics include contemporary military culture, challenges of the military lifestyle/deployment/reintegration, specific types of military trauma, psychological issues of PTSD, TBI, depression, substance abuse, and suicidality, and psychological interventions for these issues. Prereq: PSYC 1005 with a C- or higher. Students will not earn credit for this course if they have already earned credit for PSYC 3600 with a similar topic title. Max hours: 3 Credits.
Grading Basis: Letter Grade
PSYC 1005 with a C- or higher.

PSYC 3505 - Psychology and the Law (3 Credits)
Examines the legal and extralegal applications of psychology, such as assessment of insanity and competence, psychologists as expert witnesses, accuracy of eyewitness accounts, and issues relating to employment discrimination. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Spring.

PSYC 3600 - Topics in Psychology (1-3 Credits)
Studies special topics to be selected by the instructor. Note: May be repeated for credit. Term offered: fall, spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

PSYC 3611 - Psychology of Women (3 Credits)
Reviews psychological theories and research of women's social, cultural, emotional and behavioral experience. Examines the sociocultural context of women's experience and explores women's socialization, developmental issues, cognitive abilities and achievement motivation, personality variables, stereotypes, psychological disorders, victimization, intimacy and sexuality. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Summer.

PSYC 3612 - Domestic Abuse (3 Credits)
Examines the nature and extent of domestic violence. Personal characteristics and dynamics that contribute to spouse abuse are reviewed. Theories and research in the general field of family violence, victims' and perpetrators' treatment, and child abuse are discussed. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall.

PSYC 3615 - Positive Psychology (3 Credits)
This course provides an introduction to the science of positive traits, subjective experiences and institutions. It focuses on the empirical study of the factors that enable humans to flourish, develop resilience, mature and master life's challenges. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Spring.

PSYC 3724 - Developmental Neuroscience (3 Credits)
Explores the biological influences on the development of brain and behavior. Emphasis is on the evolution and development, the role of experience in prenatal and postnatal development, the ontogeny of sensory systems, learning and memory, and the biological bases of language acquisition. Prereq: PSYC 2220 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3810 - Neuropsychology (3 Credits)
Brain organization and function and its relationship to human memory, language, perception, and other cognitive abilities. Covers the application of clinical neuropsychology to working with individuals that have neurological disorders. Prereq: PSYC 1000 and 2220 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall, Spring.

PSYC 3822 - Aging, Brain and Behavior (3 Credits)
Examines the aging process, behavioral changes during senescence and the accompanying changes in the aged brain. Changes that are part of healthy aging are studied, as will age-related brain disorders. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5822. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3832 - Neural Basis of Learning (3 Credits)
Survey of advances in neuroscience that further the understanding of how neurons within our brains are modified by experience and thus influence subsequent behavior. Includes discussions of how these mechanisms contribute to various psychopathologies. Prereq: PSYC 1000 and 2220 with a C- or higher. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.
Typically Offered: Fall.

PSYC 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have Junior standing, have completed at least 12 hours in PSYC courses with a 2.0 GPA in PSYC courses and must work with Experiential Learning Center advising to complete a course contract and gain approval to enroll. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing and 12 hours of PSYC courses with a 2.0 GPA in PSYC courses
Typically Offered: Fall, Spring, Summer.

PSYC 4054 - Behavioral Neuroscience (3 Credits)
The morphological, neurochemical and physiological bases of behavior. Emphasis is on structure and function of the brain. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher
Typically Offered: Fall, Spring, Summer.

PSYC 4090 - Research Design and Development (3 Credits)
This advanced writing and research methods course is designed to help students develop independent research ideas into formal products, such as a thesis proposal, grant application, presentation, and study protocols. Prereq: PSYC 3090 and instructor permission. Cross-listed with MARC 4090. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 3090.
Typically Offered: Fall, Spring.

PSYC 4101 - Applied Statistics Using SAS and SPSS I (3 Credits)
Teaches the practical statistical tools social scientists use to analyze real-world problems. It is split into four modules, each taught by a different instructor. The first module introduces SAS and SPSS; modules 2-4 are problem-based and cover topics such as ANOVA, multivariate regression, and cluster analysis. Students are recommended to have taken and completed at least one statistics course, at any level, as preparation for optimal success. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 4102 - Applied Statistics Using SAS and SPSS II (3 Credits)
Students use the skills they learned in the previous semester to analyze a social issue of their choosing and present their findings. Note: A continuation of PSYC 4101. In addition to lectures, weekly one-on-one meetings between faculty and students are required. Prereq: PSYC 4101 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 4101 with a C- or higher

PSYC 4111 - Senior Seminar in Psychology: Career Capstone (3 Credits)
This course provides a focused integration of the skills and knowledge gained through the psychology major curriculum. As a capstone course, it will prepare students to apply what they have learned to their professional careers. Prereq: PSYC 3090 with a grade of C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: PSYC 3090 with a grade of C- or higher.
Typically Offered: Spring.

PSYC 4164 - Psychology of Perception (3 Credits)
Studies sensory processes and perceptual variables. Covers processes related to vision, audition, gustation and olfaction. Prereq: PSYC 1000 and 2220 with a C- or higher. Cross-listed with PSYC 5164. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and PSYC 2220 with a C- or higher.

PSYC 4455 - Theories of Personality (3 Credits)
An in-depth look at several major theories of personality, including those from psychodynamic, behavioral, and humanistic schools of thought. Students are required to think actively and abstractly, and communicate their ideas in papers and classroom contributions. Prereq: PSYC 1000 and 1005 with a C- or higher. Term offered: fall, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000 and 1005 with a C- or higher
Typically Offered: Fall, Summer.

PSYC 4485 - Psychology of Cultural Diversity (3 Credits)
Studies diversity in the development of the individual across Asian, Black, Hispanic, and Native American cultures. The experience of self, role of the family, expression of emotions, and psychology of prejudice are emphasized. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

PSYC 4500 - Psychotherapy (3 Credits)
Overview of the major systems of psychotherapy, including psychoanalysis, person-centered therapy, family therapy, cognitive or behavioral approaches, and relationships among the various approaches. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher

PSYC 4511 - History of Psychology (3 Credits)
Development of psychological theories since 500 B.C. Schools of psychology and their adherents. Readings of primary and secondary sources. Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher or admitted and enrolled in the Clinical Health Psychology PhD program (PSYH-PHD). Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000/PSCH 1001, 1005, 2090, 2220, 3090 and (6 credits hours or 2 courses from PSYC 3050-4990) with a C- or higher or admitted and enrolled in the Clinical Health Psychology PhD program (PSYH-PHD).
Typically Offered: Fall, Spring, Summer.

PSYC 4680 - Behavioral & Biomedical Sciences Research Seminar (1-2 Credits)
Introduces research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: permission of the instructor. Cross-listed with MARC 4680. Term offered: fall, spring. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

PSYC 4681 - Behavioral & Biomedical Sciences Research Seminar II (1-2 Credits)
Continuation of research in the behavioral and biomedical sciences. Students will learn about research programs at CU Denver and other centers, present their own research, and interact with the local scientific community. Prereq: PSYC/MARC 4680 and permission of the instructor. Cross-listed with MARC 4681. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Prereq: PSYC 4680 or MARC 4680 and instructor permission.

PSYC 4730 - Clinical Psychology: Ethics and Issues (3 Credits)
An in-depth exploration of the values and ideas that guide professional practice in psychology, including professional codes of conduct and philosophical ethical principles. Topics include confidentiality, informed consent, competence, integrity and respect. Prereq: 1000, 1005, 2090, 2220 and 3090 with a C- or higher. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher
Typically Offered: Spring.

PSYC 4780 - Behavioral & Biomedical Sciences Research: Ethics & Issues (3 Credits)
Students will critically review and analyze some of the major ethical and policy issues that arise during the conduct of basic and applied behavioral research. Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher or instructor permission. Term offered: fall. Cross-listed with MARC 4780. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PSYC 1000, 1005, 2090, 2220 and 3090 with a C- or higher
Typically Offered: Fall.

PSYC 4803 - Principles of Psychological Testing (3 Credits)
Principles underlying construction, validation, and use of tests of ability, intelligence, and personality and of attitude surveys. Covers statistical topics such as content and construct validity, item analysis, and reliability analysis. Students are recommended to have taken and completed at least one statistics course, at any level, as preparation for optimal success. Cross-listed with PSYC 5803. Max hours: 3 Credits.
Grading Basis: Letter Grade

PSYC 4840 - Independent Study: PSYC (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: Permission of instructor. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

PSYC 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PSYC 4939 - Internship (1-3 Credits)
Prereq: Students must have Junior standing, have completed at least 12 hours in PSYC courses with a 2.0 GPA in PSYC courses and must work with Experiential Learning Center advising to complete a course contract and gain approval to enroll. Term offered: fall, spring, summer. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing and 12 hours of PSYC courses with a 2.0 GPA in PSYC courses
Typically Offered: Fall, Spring, Summer.

PSYC 4990 - Topics in Psychology (1-3 Credits)
Advanced study of special topics to be selected by the instructor. May be repeated for credit. Prereq: Permission of instructor. Cross-listed with PSYC 5990. Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

Public Administration (PUAD)

PUAD 1000 - Public Service Online Success and Career Exploration (1 Credit)
Offers Public Service majors the chance to explore their career field and adapt to an online learning environment. Topics will include Canvas tips, online course etiquette, community building for the online learner, how online students can utilize CU Denver student-success resources, writing and citation tips, and contemporary time management techniques.
Restriction: Restricted to freshmen or undergraduates with less than 30 credit hours. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to freshmen or undergraduates with less than 30 credit hours.

PUAD 1001 - Why You Should Care About Government: Public Service and Administration (3 Credits)
Students will gain the opportunity to understand the discipline of public administration; public administration aims to help public and nonprofit agencies more effectively respond to public demands made by citizens, organizations, and other levels of government. Explore multiple career paths to advancing the public good in government and nonprofits, including volunteerism, citizenship, community engagement, and leadership. Consider implications for enhancing public integrity and trust in government. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

PUAD 2001 - Management for Public Service (3 Credits)
Learn how managers in public sector organizations foster human capital and manage performance in a diverse, inclusive, and collaborative workforce. Examine strategic management techniques, human resource law and procedures. Explore the values of character and competence in creating effective organizations. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 2002 - Policy and Advocacy (3 Credits)
Students will develop skills and tools for creating policy change. Public policy is the decisions and nondecisions of public actors as they attempt to address social, economic and political topics. The course will introduce students to policy change, lobbying, advocacy, and the ways in which policies lead to entrenched coalitions, perceptions, behaviors, and funding models. Max hours: 3 Credits
Grading Basis: Letter Grade

PUAD 3001 - Project Management and Program Evaluation (3 Credits)
Examine strategic management techniques, organizational theory, and tools for organizational change. Explore structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and services, and organizational strategy and effectiveness. Learn the analytical, critical thinking, and problem-solving skills required for program design, implementation, and evidence based decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3002 - Organizational and Strategic Management (3 Credits)
Examine strategic management techniques, organizational theory, and tools for organizational change. Explore structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and services, and organizational strategy and effectiveness. Learn the analytical, critical thinking, and problem-solving skills required for program design, implementation, and evidence based decision-making. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3003 - Introduction to Nonprofit Organizations (3 Credits)
Explore the historical background, development, role, auspices, organization, and purposes of nonprofit agencies. Expand awareness of the scope and breadth of the nonprofit sector in the U.S., examine the inner workings of nonprofit organizations as the foundation for further study. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3004 - Managing Nonprofit Organizations (3 Credits)
Examine leadership and decision-making theory and practice in the nonprofit sector. Explore classic and contemporary theories on leadership, management, governance and organizational effectiveness of nonprofit organizations. Techniques for effective board meetings, committee work, development of board members, and policy development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3005 - Collaboration Across Sectors (3 Credits)
Organizations across sectors respond to complex problems with innovative and flexible responses through networks. Managing within and across organizations is essential to effective performance in a networked system. Explore collaborative governance across sectors--nonprofit, for-profit, and public--with analyses and applications. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3110 - Seminar in Nonprofit Management (3 Credits)
This course provides an overview of the principles and concepts that are unique to nonprofit management. Topics include executive management, funding diversity, human resource management, marketing, volunteer management and ethics. Students are also given an introduction to the history and the importance of the nonprofit sector. Cross-listed with PUAD 5110 and CRJU 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3400 - What Communities Tell Us: Stakeholders, Public Opinion, and Community Feedback (3 Credits)
Integrating community feedback into a strategy, message, and organizational feedback loops enhances leadership, keeps leaders connected to their communities, and can help drive decision making. This course examines various forms of publicly available opinion data, techniques for collecting stakeholder and community feedback, and the challenges and opportunities this feedback can present in public and nonprofit organizations. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3500 - Managing and Leading in Environmental Organizations (3 Credits)
Students will explore the intersections between management, science, regulations, policies, and sustainable programs, and issues associated with “being green.” Students will also consider the intersection of environmental laws with efforts by businesses, governments, NGOs, and other organizations to protect natural resources, build collaborations for effective environmental management, and the deep-seated value conflicts over the causes, or even the existence, of environmental problems and the appropriate solutions to address them. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 3600 - International and Global Organizations (3 Credits)
Students will learn about the history of development paradigms and understand the relationships among development actors and how they address persistent global problems such as poverty, human trafficking, trade, education, health, and human rights, as examples. Students will understand the impact of colonialism and the finite resources available to address complex social issues in the developing world. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4000 - Human Resources and Ethics in Public Service (3 Credits)
Learn how managers in public sector organizations foster human capital and manage performance in a diverse, inclusive, and collaborative workforce. Understand ethics in public service, explore ethical concerns in public affairs, and confront ethical challenges in government and nonprofit organizations. Examine human resource law and case studies to apply ethical judgement to organizational decisions. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4002 - Leading and Engaging for the Public Good (3 Credits)
Develop a personal leadership identity, tools for collaboration and stakeholder development, as well as work toward building an understanding of the interdependence of public and nonprofit organizations within communities. Investigate cultural competency, social justice, and your own citizenship skills. Look at issues related to leadership, personal ethics and values, motivation, change management, and teamwork. Students explore how stakeholders, networks, partnerships, and communities work together to achieve public goals. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4003 - Strategic Communications for Public Engagement (3 Credits)
Strategic communicators are needed in all fields, especially those that serve the public good. Grow in your abilities to demonstrate the value of government, educational, and non-profit organizations while driving positive engagement with diverse audience networks. Gain relevant professional writing, facilitation, presentation, social media, and crisis management skills to support your favorite institutions. Learn how to conduct situational and diverse audience analyses, solidify objectives, appreciate place branding, and craft messaging. Experience the excitement of executing the public communications function through guest speaker appearances, experiential outings and discussions, and hands-on activities. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4004 - Building Public and Financial Support for Nonprofit Organizations (3 Credits)
Examines methods, techniques, and directed experience in fundraising for nonprofit agencies. Explores relationships with umbrella organizations, government funding, grantsmanship, budget control, and accountability. Discusses social entrepreneurship and social innovation. Examines communications, marketing, and public relations intersection with resource development. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4005 - Human Rights and Social Equity (3 Credits)
Achieving social equity is only possible through significant public policy, administration, leadership and managerial changes. This class explores the intersection between achieving social equity and efforts toward securing human rights. The course will cover local, state, and global challenges that public administrators face as they aim to address harms created by policy legacies. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4006 - Organizational Development (3 Credits)
Examine structures, life-cycles, and change dynamics of government and nonprofit organizations including organizational culture, the relationship between organizational structure and service provision, and organizational strategy and effectiveness. Learn diagnostic and assessment tools, methods, and processes for improving organizational performance. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4007 - Nonprofit HR: Governance, Staff, Volunteer Management (3 Credits)
Current issues in human resource administration for employees of nonprofit organizations. Topics include such areas as recruitment, staff development, volunteer management, performance, evaluation, labor-management issues, and affirmative action. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4008 - Current Issues in Public Sector Organizations (3 Credits)
Explore the impact on public sector organizations of emergent issues such as globalization, changing demographics of the citizenry and workforce, sustainability, declining budgets, and information technology. Examine ways public sector organizations adapt to these trends. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4009 - Human Service Organizations (3 Credits)
Provides an overview of human services delivery in government and nonprofit organizations. Explore causes and conditions that give rise to the need for effective and equitable human service organizations. Learn essential skills including cultural competencies, boundaries, and collaboration. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4010 - Public Service in Emergency Management and Homeland Security (3 Credits)
Introduces emergency management and homeland security including: management of hazards, emergencies, disasters, and the networks of government and nonprofit organizations providing services. Focuses on principles of emergency management and homeland security at state and local jurisdictional levels. Cross-listed with PUAD 5650, CRJU 4010, and CRJU 5650. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4011 - Community Resilience, Climate, and Emergency Response (3 Credits)
Climate change and disaster mitigation increasingly consumes time, energy and efforts of public and nonprofit leaders. This course, through an all-hazards approach, will guide students in understanding how communities can plan, prepare, respond and mitigate potential climate-related and mass casualty disasters. Through case studies and public sector agencies, students will explore techniques that can enhance community resilience, create partnerships across jurisdictions, and reduce risk. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4012 - Principles of Emergency Management (3 Credits)
Introduces the discipline and practice of emergency management. Topics include administrative practice and processes by which public policy shapes governmental responses to hazards, emergencies, and disasters. Cross-listed with PUAD 5655, CRJU 4012 and CRJU 5655. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4020 - Social Entrepreneurship (3 Credits)
Social entrepreneurship, practices, theories, and allied concepts. Using private, nonprofit, and government examples, explore innovation, creativity, profit for social welfare, and innovative management. Advance an organization's social good mission, and increase effectiveness, accountability, and efficiency through market-based techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4140 - Nonprofit Financial Management (3 Credits)
Provides a grounding in financial management for the "non-accountant" by focusing on an array of knowledge and management skill areas necessary for allocating and controlling resources and for analyzing, reporting and protecting the fiscal health of the organization. Topics include key accounting principles, understanding and using financial statements, the budget development process, cash flow analysis, banking relationships, using the audit report, maximizing investment policy and strategy, and understanding the boundaries of tax exemption. Cross-listed with PUAD 5140 and CRJU 5140. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4145 - Philanthropy (3 Credits)
Today, the organized field of philanthropy and its companion field, impact investing, are growing at a remarkable speed. This course will explore the origins of philanthropy and impact investing and provide students with an in-depth understanding of how philanthropy works today and the nuances that exist among different forms of philanthropy and investment: individual giving, foundations, corporate philanthropy, and impact investing. It will also explore new trends among individual and institutional investors and unpack the different approaches that funders are taking to influence how services are delivered and the striking efforts to affect systems changes. Cross-listed with PUAD 5145. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4160 - Nonprofit Boards and Executive Leadership (3 Credits)
The important roles and responsibilities of a voluntary board of directors and the process of governing are often misunderstood. This course explores the special powers of a nonprofit board of directors as framed by and responsive to public policy. From the perspective of organizational behavior and theory, the course examines the leadership role and interplay between board members and the executive director. The examination includes a comparative analysis of different governing models, and explores fundamental questions of board composition, the role of advisor boards, achieving effective board meetings, the realm of liability, using committees, and the board's role in fundraising, among other special subject matter. Cross-listed with PUAD 5160. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4220 - Human Resource Management (3 Credits)
Covers human resource functions in public and nonprofit agencies. Topics include job analysis, compensation, recruiting, selection, rewarding, training and development. Contemporary issues concerning civil service reforms are also presented. Cross-listed with PUAD 5220. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4325 - Public Private Partnerships (3 Credits)
This course has been designed to introduce students to public private partnerships (PPPs) as a field of study and practice using Colorado as a laboratory for current practice, policy, strategy, management and finance. Students will engage current examples of PPPs as cases, learn and exchange in class presentations with guest lecturers currently leading PPPs and evaluate projects in class assignments doing research, analysis, and field interviews. Students will enhance their knowledge as well as skills commonly used in public, private, nonprofit and enterprise management and the public policy context and narrative of PPPs in international and U.S. practice. Cross-listed with PUAD 5325. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4440 - Negotiation and Conflict Resolution (3 Credits)
Focuses on concepts and skills necessary to negotiate policy and management decisions and manage internal and external conflicts. Designed to help students understand the dynamics that affect negotiations and to apply the principles and strategies of negotiation in a variety of decision making and dispute resolution contexts. Cross-listed with PUAD 5440. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4600 - Special Topics in Public Service (1-6 Credits)
This highly specialized seminar addresses cutting-edge and emerging developments in the field of public service and provides students and faculty with the opportunity to explore significant themes, issues and problems from a broad interdisciplinary perspective. Topics vary from semester to semester. Repeatable. Max hours: 18 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 18.

PUAD 4620 - Crisis and Emergency Communication (3 Credits)
This course examines strategic communication practices throughout the three stages of a crisis or emergency event. Special emphasis is placed on crisis planning, emergency messaging, media relationships, image restoration, ethical responses, and organizational learning. Cross-listed with PUAD 6620, COMM 4557, and COMM 5557. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

PUAD 4628 - Social Problems and Policies in the Urban Environment (3 Credits)
Examines local government and nonprofit approaches to addressing common urban social problems. Topics covered may include urban poverty, crime, education, housing, and immigration. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4630 - Economic Development (3 Credits)
As governments search for new ways to be efficient, improve performance and leverage resources, they are also looking at their communities, states and regions in terms of competitiveness, international trade and globalization innovation, collaboration and partnerships. This course will look at practices where economic development includes these elements: the Colorado Innovation Network, the Colorado Office of Economic Development and International Trade, the Metro Denver and Denver South Economic Development Partnerships, Mile High Connects, the Downtown Denver Partnership, and public-private partnerships across multiple sectors in transportation, broadband, water and innovation. Students will develop an economic development strategy based on knowledge and tools learned in the course. Political and professional leadership will be part of the dialog. Cross-listed with PUAD 5630. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4633 - Economic Development (3 Credits)
As governments search for new ways to be efficient, improve performance and leverage resources, they are also looking at their communities, states and regions in terms of competitiveness, international trade and globalization innovation, collaboration and partnerships. This course will look at practices where economic development includes these elements: the Colorado Innovation Network, the Colorado Office of Economic Development and International Trade, the Metro Denver and Denver South Economic Development Partnerships, Mile High Connects, the Downtown Denver Partnership, and public-private partnerships across multiple sectors in transportation, broadband, water and innovation. Students will develop an economic development strategy based on knowledge and tools learned in the course. Political and professional leadership will be part of the dialog. Cross-listed with PUAD 5633. Max hours: 3 credits.
Grading Basis: Letter Grade

PUAD 4638 - Colorado Politics, Policy, and Administration (3 Credits)
This course focuses on the state-level policy-making process in Colorado, and how that process is affected by local, state, and federal politics, administration, and other policy-making constraints applicable to the state. Substantive topics covered will vary, but students will be exposed to a wide range of perspectives and experiences from practitioners and policy influencers engaged in state-level politics, policy-making, and administration. Cross-listed with PUAD 5638. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4740 - Sustainable Energy Policy (3 Credits)
This course will cover the basic principles and operation of policy and regulation that impact the production and use of energy (with a focus on transportation and electricity generation) from all of the major sources currently available and used. We will analyze (and, through a sustainability lens, critically evaluate) energy from water (hydroelectric, hydrokinetic), coal, domestic and international petroleum, natural gas and nuclear reactors. A significant portion of the course will focus on electricity generation and associated policy, technologies and regulation. In the context of each energy source and use, we will review and discuss sustainability practices, policies, and, issues. Cross-listed with PUAD 5740. Max hours: 3 credits
Grading Basis: Letter Grade

PUAD 4840 - Independent Study (1-6 Credits)
This course consists of faculty-guided research in an area of mutual interest to the student and instructor. Students are responsible for selecting their area of inquiry prior to contacting the instructor. Permission of instructor is required. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PUAD 4939 - Public Service Internship (1-9 Credits)
The internship course, required for all Public Service majors unless waived, provides career-related experiential learning in a government agency or nonprofit organization. Students must apply to the internship course in the semester before they hope to enroll and obtain permission from their advisor and the instructor prior to enrolling. Prereq: PUAD 1001 plus any other 2000 level (or higher) PUAD course, a GPA of 2.0, and a minimum of 15 UCD credit hours completed. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

PUAD 4941 - Integrating Professional Public Administration (3 Credits)
This is a student-directed, project-based course that allows the student to bring together their entire collegiate knowledge base into a project, program, thesis, or experience that will demonstrate how their public administration knowledge and expertise connects to their BAPA Core, concentration, thematic sequence, core University requirements, and personal goals. This course is intended for students in their final semester of the bachelor's degree. Max hours: 3 Credits.
Grading Basis: Letter Grade

PUAD 4961 - Capstone (1-10 Credits)
Synthesizes competencies gained throughout the course of study into a client-based research project. Students conduct independent research, complete a final project demonstrating their qualifications and expertise.
Restriction: Restricted to undergraduate students in the School of Public Affairs. Max hours: 10 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 10.
Restriction: Restricted to undergraduate students in the School of Public Affairs.
Additional Information: Report as Full Time.

PUAD 4995 - Global Study Topics (3 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Cross-listed with PUAD 5995. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall.

Public Health (PBHL)

PBHL 1001 - Race, Gender, Class, & Health (3 Credits)
Course focuses on the principles, tools, and population approach of social epidemiology as it relates health to race, gender, and class. Contemporary topics in public health will be used as case studies to illuminate principles and tools both in lecture and in recitation sections. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

PBHL 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

PBHL 2001 - Introduction to Public Health (4 Credits)
An overview of the discipline and practice of public health. Includes the history of the field, its population perspective, emphasis on prevention, tools and techniques. General principles of the field are illustrated through contemporary public health case studies. Term offered: fall, spring. Max hours: 4 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul; Denver Core Requirement, Social Sciences.
Typically Offered: Fall, Spring.

PBHL 2052 - Global Demography and Health (3 Credits)
This course examines current issues in population growth, fertility, mortality and migration throughout the globe; introduces basic demographic tools; encourages critical thinking about the causes and consequences of population change. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

PBHL 2990 - Topics in Public Health (3 Credits)
An in-depth study of selected social science perspectives/theories and their applications to population health. Topics will vary from semester to semester, with a particular emphasis on current, salient population health problems. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

PBHL 3001 - Introduction to Epidemiology (4 Credits)
Introduces the basic concepts of public health and epidemiology, including assessment of disease in the community, the study of causation and association of disease with lifestyle and environmental risk factors, as well as related special topics. We recommend coursework in college algebra or higher as preparation for this class. We have found that students who take this class before completing their math requirements are at a distinct disadvantage in this course, which is math-intensive. Therefore a grade of C or higher in MATH 1110 or equivalent is strongly recommended. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PBHL 3002 - Ethnicity, Health and Social Justice (3 Credits)
Surveys core issues contributing to racial or ethnic minority differences in health status. Historical and contemporary U.S. health and social policy, including the areas of environmental health, sexual and reproductive health, children and immigrants, are examined. Cross-listed with ETST 3002. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

PBHL 3010 - Human Sexuality and Public Health (3 Credits)
The focus of this course is on human sexuality using a public health lens, examining a number of sexual health issues and their relationship to individual, familial, organizational, and social-level influences. Additionally, we will focus on identifying both primary prevention and intervention approaches to reducing sexual risk factors and increasing healthy behaviors. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3020 - Introduction to Environmental Health (3 Credits)
This introductory survey course focuses on the human health implications of environmental exposures. Topics include pathways of exposure, toxicology, risk assessment, regulations, and policy development. Additionally, environmental equity, ethics, globalization, international perspectives, climate change, sustainability, and activism are considered. Prereq: PBHL 2000 or 2001 with a C- or higher. Note: Students will not earn credit for this course if they have already earned credit for PBHL 2020. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3021 - Fundamentals of Health Promotion (3 Credits)
Provides an overview of the field of health promotion, including an introduction to key theories and methods, as well as exposure to the breadth of programs and diversity of settings through several case studies. Includes attention to health behaviors as contributors to current public health problems and community-based approaches to health promotion in addressing them. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3030 - Health Policy (3 Credits)
Health policies may have a profound effect on quality of life. Accessibility, cost, quality of health care; safety of food, water, and environment; the right to make decisions about our health; these issues are vitally tied to health policies. This course provides a framework for understanding the social, political and economic dimensions of health policy. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3031 - Health, Human Biology and Behavior (3 Credits)
Introduces the multi-factorial nature of human health and well-being. Considers the influences of biology (genetics), behavior, environment, culture and social determinants, and health policy on the nature of disease and health problems from an integrated perspective. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

PBHL 3041 - Health, Culture and Society (3 Credits)
Examines health and illness for individuals, families, and societies from multiple international perspectives, focused on topics such as traditional vs. Western medicine, characteristics of healers and therapeutic relationships, and stigmatized segments of society and their health status. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3050 - Decision Making (3 Credits)
This course discusses current research on decision making/behavioral economics, as well as its application to individual well-being and public policy. You will gain insights on how and why people can be irrational in their daily decisions. Cross-listed with ECON 3050 and PSYC 3050. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3051 - Mental Illness and Society (3 Credits)
This course takes a social and public health--as opposed to medical, biological or psychiatric--approach to understanding mental disorder and society. Course addresses historical definitions of mental illness, social patterns of mental disorder and treatment and experience of mental illness patients, focusing on the U.S. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3060 - AAPI Communities and Health (3 Credits)
Surveys core issues shaping health experiences and health status of Asian American and Pacific Islander communities in the United States. Historical and contemporary U.S. health and social policies that have directly impacted AAPI health and well-being in the United States are examined. Students will also engage with community leaders and partners committed to AAPI communities. Cross-listed with ETST 3060. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3070 - Perspectives in Global Health (3 Credits)
This course examines public health approaches to analyzing health issues and identifying evidence-based and culturally appropriate interventions to reduce health inequities and improve global health. Focuses on challenges to global health such as under-resourced health systems, lack of effective global governance, aging populations, rising chronic diseases, and climate change. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 3071 - Global Topics In Sexual and Reproductive Health (3 Credits)
Surveys trends and determinants of sexual and reproductive health around the globe and in the United States. Examines the social and behavioral determinants of sexual and reproductive health and the influence of policy. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3081 - Health in the City: Urban Health (3 Credits)
This course introduces students to urban health and the various factors of the physical, social and health environments that affect well-being and vulnerability of communities and neighborhoods in cities. Note: This course will include a weekly collaborative assignment, a high-impact educational practice, that foster student engagement with active and problembased learning. Although not required, it would be helpful for students to have completed a 2000-level course from the undergraduate program in Public Health. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3091 - Live Long and Prosper: Public Health & Aging (3 Credits)
This course provides a broad overview of the interdisciplinary field of public health aging, ranging from individual attitudes and beliefs about aging to policies that aim to maximize health and well-being among older adults. A key focus is on the diversity that exists among older adults and the promotion of healthy aging for all by examining changes to social, behavioral, and biological functioning with age. Note: Although not required, it would be helpful for students to have taken a 2000-level course in public health. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3200 - Human Migration: Nomads, Sojourners, and Settlers (3 Credits)
Explores the relationship between human migration, voluntary and forced, and social organization and culture in the modern world. Case studies include pastoralists, foragers, refugees, immigrants, sojourners, and settlers and their impact on health, culture, identity, ethnicity, tradition and nationality. Cross-listed with ANTH 3200. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3440 - Medical Sociology (3 Credits)
This course covers key issues in population health and emphasizes how sociological perspectives both challenge and augment biomedical perspectives on health and health care. We also discuss the social causes and consequences of race/ethnic, sex, and socioeconomic disparities in health. Cross-listed with SOCY 3440. Max Hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 3939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.00 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.00 cumulative GPA
Typically Offered: Fall, Spring, Summer.

PBHL 3999 - Special Topics in Public Health (1-4 Credits)
Explores topics in public health. Topics will vary from semester to semester, with a particular emphasis on current topics. Prereq: Junior or senior standing or permission of instructor. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: junior standing or higher

PBHL 4020 - Global Health: Comparative Public Health Systems (3 Credits)
Within a limited period of time, middle and low income countries have experienced dramatic changes that affect the length and quality of peoples' lives. The health indicators for each country reflect a rich and meaningful context within interacting systems of economic, social, cultural patterns, and environmental and social justice. Analysis and contrast of public health indicators such as the millennium development goals develop an understanding of the complexity against a background of change. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with URPL 6349. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4021 - Community Health Assessment (3 Credits)
Introduces applied methods of public health, including: analyzing community-level assessment data, developing a casual model for selected health outcomes, maximizing community participation in the assessment process, developing assessments as a team, and setting the stage for effective intervention and evaluation. Prereq: Upper division standing, a course in statistics, and an introductory course in epidemiology (HBSC 4001, 5001). Cross-listed with HBSC 5021. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4031 - Ethnographic Research In Public Health (3 Credits)
Qualitative, ethnographic tools for practical applications in public health, including methods of direct observation, informant interviews, focus groups, structured ethnographic methods, rapid assessment and participatory action research. Basic analytic strategies, including review of computer software, coding and data display techniques. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4040 - Social Determinants of Health (3 Credits)
This course explores social inequalities in physical and mental health, the illness experience, the healing professions, health policy, relations between providers and patients, and the structure, access to, and financing of health care organizations, with some cross-national discussions. Prereq: PBHL 2000 or 2001 with a C- or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: PBHL 2000 or PBHL 2001 with a C- or higher
Typically Offered: Fall, Spring.

PBHL 4070 - Health Disparities (3 Credits)
The purpose of this seminar is to provide students with an understanding of how historical, psychosocial, environmental, and to some degree, biological and genetic factors contribute to inequality in health and health care. Prereq: PBHL 4040, PBHL 3001, PBHL 2051 with a grade of C- or better. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: PBHL 2051, 3001, and 4040 with a grade of C- or better

PBHL 4080 - Global Health Practice (3 Credits)
A travel-study course that provides students the opportunity to work on global health issues in the context of a supervised internship experience. In addition to a formal internship placement or directed research opportunity, students attend formal lectures and participate in seminars devoted to addressing those health issues most relevant to the country in which the course is being taught. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with ANTH 4080/5080. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4090 - Psychedelic Anthropology (3 Credits)
Psychotropic drugs, both legal and illicit, are a predominant part of our everyday lives. This course examines their use and meaning within cultures of health and wellness, and the plant medicine, spiritual, social, political and economic issues that surround their production, use and misuse. Course activities focus on ethnographic research strategies and arts-based approaches to public scholarship. Prereq: Junior or Senior standing or permission from instructor. Cross-listed with ANTH 4090/5090. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4099 - Capstone Experience in Public Health (3 Credits)
Offers students the opportunity to integrate, synthesize and apply concepts learned throughout the core curriculum of the public health major to real-world issues. The course involves extensive writing and small group presentations on the epidemiological, global, social, environmental, and policy dimensions of current problems in public health. Prereq or Coreq: PBHL 2000 or 2001 and all or all but one of PBHL 2020 or 3020, PBHL 3001, PBHL 3030, PBHL 3070, PBHL 4040 with a C- or better. Students must enroll in that remaining course concurrently with PBHL 4099. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq/Co-req: PBHL 2000 or 2001 and all or all but one of PBHL 2020 or 3020, PBHL 3001, PBHL 3030, PBHL 3070, PBHL 4040 with a C- or better, and take that remaining course concurrently with PBHL 4099.
Typically Offered: Fall, Spring.

PBHL 4110 - Public Health Perspectives On Family Violence (3 Credits)
Public health views family violence from a prevention perspective. Our exploration of child abuse, intimate partner violence, and other forms of family violence will complement other disciplinary approaches by focusing heavily on the community and social factors that contribute to abusive relationships. Theories of power and coercion and approaches to researching these issues will be analyzed and discussed through our exploration of the various forms of family violence. Prereq: Junior or Senior standing or permission from instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

PBHL 4200 - The Global HIV/AIDS Epidemic (3 Credits)
Provides a foundation for a critical analysis of HIV/AIDS in global context, concerning topics such as disease, the body, ethnicity/race, gender, sexuality, risk, addiction, power, and culture together with a set of ethnographic texts that explore the epidemic's impact. Cross-listed with HBSC 4200. Term offered: summer. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

PBHL 4620 - Health Risk Communication (3 Credits)
We are bombarded all day with communication expressing a sense of risk, of danger, of threats to our individual and communal well-being. This class acquaints students with contemporary theory, research, and practice in health risk communication across a variety of threats both real and imagined. Cross-listed with COMM 5620, COMM 4620, and ENVS 5620. Max hours: 3 Credits.
Grading Basis: Letter Grade

PBHL 4840 - Independent Study (1-4 Credits)
This course requires active independent learning based upon a written curricular outline and agreement with faculty in Public Health who supervise the student's work throughout the semester. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Typically Offered: Fall, Spring, Summer.

PBHL 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

PBHL 4995 - Global Study Topics (3-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Prereq: Upper division undergraduate standing and permission of instructor.
Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

PBHL 4999 - Topics in Public Health (4 Credits)
An in-depth study of selected social science perspectives/theories and their applications to population health. Topics will vary from semester to semester, with a particular emphasis on current, salient population health problems. Prereq: Junior or senior standing or permission of instructor. Cross-listed with HBSC 5999. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: junior standing or higher

Religious Studies (RLST)

RLST 1610 - Introduction to Religious Studies (3 Credits)
Religion is a complex phenomenon which involves social norms, beliefs and fears, and overarching world view. Religious experiences are among the most profound an individual can have. The course examines religious phenomena from various perspectives, including philosophical, historical, psychological, anthropological, political, sociological, the symbolic and ritual. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

RLST 2660 - World Religions (3 Credits)
Provides an introduction to the basic beliefs and concepts of the world's great religious traditions. Covers the history, development, belief patterns, and institutional forms of the world's religions, including Judaism, Zoroastrianism, Christianity, Islam, Hinduism, Buddhism, Confucianism, Taoism and Shintoism. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Humanities; GT courses GT Pathways, GT-AH3, Arts Hum: Ways of Thinking.
Typically Offered: Fall, Spring, Summer.

RLST 2680 - The American Indian Experience (3 Credits)
Surveys the relationships between Indian and non-Indian peoples, particularly in the context of the unique interaction between tribes and the federal government. Cross-listed with ETST 2606. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 2700 - The Bible as Literature (3 Credits)
Introduces students to biblical literature. Selections from the various genres of writing in Hebrew (history, wisdom, prophecy, literature) are read and discussed, as well as representative sections from the New Testament, including the gospels and the writings of Paul. Cross-listed with ENGL 2520. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3000 - Judaism, Christianity and Islam: Affinity and Difference (3 Credits)
Judaism, Christianity and Islam have much in common, beginning with their common patriarch Abraham. But there are also elements in each that are unrecognizable from the perspectives of the other two. This course will trace the relationships among the Children of Abraham across history and in today's turbulent world. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3003 - From Buddha to #BlackLivesMatter: The Past and Future of Nonviolence (3 Credits)
Why is "Nonviolence" central to many of the religious traditions of South Asia? What has nonviolence looked like historically and how has its meaning and practice changed in the modern world? In traditions such as Hinduism, Jainism, and Buddhism, the practice of nonviolence relates to ethics through concepts of "karma"-our actions. This course begins with an investigation of the theories of karma and the roles they play in these traditions' ideas about the self, the other, and the world. We will take a focused look at the way each tradition regards the idea and practice of ahimsa, nonviolence, as both an ethical and personal good. That is, how does each tradition consider what is proper social action and how do they relate it to the attainment of salvation (i.e. moksha, nirvana)? The course puts Indian thought in conversation with western philosophies to question how we might develop a critical vocabulary for the comparative study of ethics. Turning to the modern era, we will examine Gandhi's philosophy and practice of nonviolent action in the anti-colonial struggle for India's independence, as well as how Rev. Dr.Martin Luther King adapted Gandhi's ideas to the struggle for civil rights in the US. Finally, we will examine recent critiques of nonviolence from American philosophers, activists, and communities of color to see ways that nonviolence continues to play a role in rethinking major issues for fostering equality and equity in the US and global contexts, including policing and religious and ethnic nationalism. Cross-listed with ETST 3003, HIST 3003, INTS 3003, PHIL 3003, and HIST 5003. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

RLST 3060 - History of Early Christianity (3 Credits)
History of the rise of Christianity and the decline of paganism in the Roman Empire from the birth of Jesus of Nazareth to ca. 500 C.E. Special emphasis on social, historical, legal, and cultural context of Christianity's rise and paganism's decline. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3100 - Islamic Politics and Culture (3 Credits)
Comprehensive, in-depth study of Islam and Muslims. Islam is viewed as a "way of life" with social, economic, psychological, spiritual, and political implications. Among topics to be examined are: women in Islam, Jihad, fundamentalism, Islamic movements, Islam and the West. Cross-listed with PSCI 4165. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3120 - Islamic Traditions (3 Credits)
Examines birth and history of Islam, its evolution from beginning to current trends and issues. Covers core beliefs, practices, differences between Sunni and Shi'a sects, and relationship to other Western religions. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

RLST 3300 - Shamanic Traditions (3 Credits)
Explores shamanic religious traditions across the world. This form of religion, involving spiritism, animism, trance states, and "mind power," is the oldest and most widespread religion in world history. Cross-listed with ETST 3300. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3410 - Asian Philosophies and Religions (3 Credits)
We in the Western world encounter a vastly different world, a radically different "universe of meaning," when we examine the traditions of the East. Even what we tacitly assume to be "real" is claimed by the Hindus and Buddhists of India to be a grand illusion. The world of China is, again, very different from India. An examination of Tibetan and Japanese religious forms will conclude our study of Asian thought. Cross-listed with PHIL 3410. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring.

RLST 3486 - Renaissance and Reformation (3 Credits)
Explores the late 13th through middle 17th centuries when European art and culture changed dramatically, and when Europe was torn by explosive ideological conflicts and religious upheaval. Cross-listed with HIST 3486. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3500 - Religions of India (3 Credits)
Examines the transcendentalist philosophy of India, which rests at the foundation of the great Eastern religious traditions of Hinduism and Buddhism. The Indian ideas of God, the soul, time, the nature of the universe, and its ultimate goal are examined. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 3660 - Chinese Philosophy and Culture (3 Credits)
China is a fascinating world with its own characteristic orientation to philosophical questions. Chinese thinkers produced the "Flowering of a Hundred Schools of Thought" in the Axial Age, the same period of time in which philosophy was coming to birth in ancient Greece. Covers some of the Chinese schools, including Confucianism, Taoism, Mohism, Legalism, Chinese "Logic," and the later schools of Neo-Confucianism, Neo-Taoism and Chinese Buddhism. Cross-listed with PHIL 3981. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3720 - Religious Narratives (3 Credits)
Investigates the language and structure of religious discourse in Western literature. Welcomes interdisciplinary and comparative perspectives with a focus on cultural constructions of the sacred. Cross-listed with ENGL 3520. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3740 - Biblical Traditions: Old Testament (3 Credits)
Investigates the history and nature of the Biblical text. Follows the tradition of critical scholarship beginning in the Enlightenment era and continued down to the present day, sometimes entitled "Secular Humanism." Topics include theories of authorship of the Torah, its general nature and content; the historical books of the Bible, the Prophets, and the Wisdom Literature. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3760 - Biblical Studies: New Testament (3 Credits)
Examines the books of the New Testament from a scholarly, historical-critical perspective, which views it as a historically and culturally conditioned text, reflecting the beliefs and attitudes of the authors who produced it. The course covers the canonical gospels, letters, and other writings of the New Testament. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 3770 - Archaeological Discoveries Relating to the Bible (3 Credits)
Examines the revolutionary impact of archaeology on Biblical Studies. Among these discoveries are Egyptian, Mesopotamian, and Canaanite texts, the Dead Sea Scrolls, and the Gnostic texts. Through these investigations, the Bible will be placed in its appropriate historical, literary and cultural context. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 3800 - Spirituality and Ecology in Global Societies (3 Credits)
This course will examine the historical and contemporary attitudes and actions of religion in responding to the societal impacts of environmental concerns. We will investigate four worldviews in particular: indigenous traditions, Christianity, Judaism and Buddhism, and also consider how these traditions interact with public policy debates and their position on social justice and environmental issues. Religions both create and mitigate conflict. This course will consider ethical and moral approaches, philosophical principles and social movements including ecofeminism and ethics to provide tools for dialogue and critical thinking around ecological challenges. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.
Typically Offered: Spring.

RLST 4000 - Religion and Cultural Diversity (3 Credits)
Religion is one of the key elements which creates multiculturalism. This course explores issues in religion and religious identity in contemporary America, including Native American spiritual traditions, Jewish-American traditions, Muslim-American traditions, Asian-American traditions, the African-American Pentecostal movement, and the growth of the Black Muslim movement. Attention is also given to the question of gender issues, as the traditional model for gender roles was formulated, in part, from a religious basis. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Spring.

RLST 4002 - Race, Gender and Religious Nationalisms in Asia and the US (3 Credits)
This course investigates ideologies and practices of race, caste, ethnicity, and gender at the foundations of several contemporary religious nationalist movements in Asia and the US. The course focuses first on the ways that religious ideologies and practices of gender help to define and police the borders of race, caste, and ethnicity as social identities. We will examine how these ideologies emerge in religious texts and how they have been challenged in literature and practice, both historically and in the modern era, while privileging the works, voices, and perspectives of women and queer caste-oppressed and racialized philosophers, activists, and thinkers. The course then seeks to give students conceptual and theoretical foundations to understand the relationship between race/caste/ethnicity and gender in religious nationalisms, while presenting case studies from Asia and the US to reflect on and challenge these models. Students will have the opportunity to conduct further research into these issues in Asia, the US, and other parts of the world. Cross-listed with HIST 4002, CHIN 4002, ETST 4002, INTS 4002, and HIST 5002. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

RLST 4010 - Comparative Religious Systems (3 Credits)
A cross-cultural analysis of religious belief and behavior. Emphasis is placed on religions found among non-Western cultural groups and includes consideration of how major religions of the world are manifested on local levels. Cross-listed with ANTH 4130, 5130, RLST 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4020 - Sociology of Religion (3 Credits)
This course introduces students to the nature and functions of religion in society, emphasizing western religions in the U.S. Students will develop and apply an understanding of classic and modern sociological theories of religion to current events and disciplinary developments. Cross-listed with SOCY 4610, SOCY 5610, RLST 5020. Prereq: Junior or Senior standing or permission from instructor. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

RLST 4030 - Race, Religion and Belonging in the United States (3 Credits)
Race/ethnicity and religion are conconstitutive social and cultural formations that have played a fundamental part in determining the boundaries of belonging of the United States. In this course, students will interrogate when, why and how race/ethnicity and religion have been used to delineate borders, determine citizenship, navigate legal classifications, dictate social mobility, and regulate economic possibilities. We will analyze both primary sources #such as sermons, reality TV shows, court cases and graphic images#as well as scholarly writing to explore how formations of race and religion have shaped notions of belonging in the US nation#state, thereby constructing the boundaries of the state itself. Cross-listed with ETST 4030, ETST 5030, RLST 5030, HIST 4209 and HIST 5029. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4040 - Psychology of Religion (3 Credits)
Examines the theories developed by some of the great names in the field of psychology and their approaches to religion. Questions addressed include why people become religious, how religion functions in their lives, religious experience and assessment of the validity of religious claims. Key theorists studied include: William James, Sigmund Freud, Carl G. Jung, Abraham Maslow and Erich Fromm. Cross-listed with RLST 5040. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4060 - Questioning Religious Belief and Practice: Introduction to Philosophy of Religion (3 Credits)
Does God exist? Can the existence of God be proved? When is believing on faith acceptable? How or why is there a “problem of evil”? What are the attributes of a "god" and how can they be known, if at all? What is the relation of God to the world we experience? How does morality relate to religious belief and practice? The goal of the course is to broaden and deepen our understanding of key philosophical debates within religious traditions as we study prominent thinkers in the history of philosophy. Cross-listed with HUMN 5600, PHIL 4600, PHIL 5600, RLST 5060, and SSCI 5600. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

RLST 4070 - Western Religious Thought (3 Credits)
Focuses on philosophers and theologians who have contributed to the evolution of the three great religious traditions of the West: Judaism, Christianity and Islam. Targets thinkers from three periods: the ancient or formative era, the medieval era, and the contemporary era. Note: Specific philosophers chosen may vary in different semesters. Cross-listed with PHIL 4710. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4080 - Eastern Religious Thought (3 Credits)
Parallels the course in Western religious thought. The great religious traditions of the East, including Hinduism, Buddhism, Confucianism, and Taoism, are examined as they are presented in the writings of key philosophical representatives of each tradition. Cross-listed with PHIL 4720. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4100 - Special Topics in Religion (3 Credits)
This special topics course allows for a variety of subjects to be explored in different semesters, including such issues as the nature of religious experience, communication with the divine, specific historical themes and events in religion. Term offered: spring. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Spring.

RLST 4152 - Religion & Communication (3 Credits)
This course focuses on the dynamics between religion, culture, and communication and how these have led to intercultural peace, centuries of war, and/or different visions of belonging. This class addresses these dynamics to improve intercultural dialogue and conflict resolution processes, foregrounding the search for justice. Cross-listed with INTS 4152, COMM 4152, COMM 5152, INTS 5152, and RLST 5152. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4160 - Mysticism (3 Credits)
Explores the mystical strains within the world's great religious traditions. Jewish, Christian, and Islamic mystics did not always express the same beliefs and attitudes as mainstream adherents. When mystics are placed side-by-side, amazing similarities appear. One cannot always tell whether a given mystical statement is Hindu, Jewish, Sufi, or Christian. This class examines these mystical traditions, East and West. Cross-listed with RLST 5160. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4300 - Myth and Symbol (3 Credits)
Approaches the field of classical Greek mythology and religion from the perspective of Jungian archetypal theory. The deities of the ancient Greeks are presented as archetypal patterns with universal correlates elsewhere in world religions. A foundation in C. G. Jung's archetypal theory will be offered to ground the course material. Cross-listed with RLST 5300. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4320 - Spirituality in the Modern World (3 Credits)
Examines the issue of spiritual currents in the modern world. Joseph Campbell claimed that Western culture long ago lost an active sense of the sacred and that the traditional religions have not been the spiritual center for the vast majority of moderns for centuries. This class looks at the modern spiritual awakening in Shamanism, Eastern thought, the New Age movement, the men's movement, paganism and Goddess religion, and the revival of traditional religious forms in recent decades. Max Hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4340 - The Hero's Journey (3 Credits)
The myth of the hero's journey serves as a metaphor for the vicissitudes life puts each of us through. The hero or hera represents the ego-self who undertakes the journey--a grand adventure into the realm of the unknown--to seek the treasure. He or she is greatly transformed by the process, ultimately into the great self, who wins the boon to share with all humanity. Versions of the story are found all over the world, such as in the sagas of Gilgamesh, Odysseus, Psyche, King Arthur, Dorothy of Oz, and Luke Skywalker from a galaxy far, far, away. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4360 - Freudian and Jungian Perspectives in Dream Analysis (3 Credits)
Focuses on the phenomenon of dreams in a way that differs distinctly from the traditional approach to the subject in the field of psychology. "Spiritual" approaches to dreams are examined, as well as some major theorists on dreams, especially the work of Sigmund Freud and C. G. Jung. Cross-listed with RLST 5360. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4400 - Differing Concepts of God (3 Credits)
God, Gods, and Goddesses have been imagined in many different modes, forms, aspects, and guises throughout human history. This course investigates Paleolithic models of God, the Great Goddess of the Neolithic era, the Gods of mythological traditions, Biblical God, the abstract God of the philosophers, the God of the pantheists, the deists, and the God of the mystics. Cross-listed with RLST 5400, PHIL 4650 and 5655. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4420 - Goddess Traditions (3 Credits)
Explores the many forms which Goddesses have assumed through history, including the Neolithic Great Mother and her heiresses in the ancient Mediterranean cultures, such as: Isis, Ishtar, Demeter, Hecate, Aphrodite, Artemis, Athena and others, and their parallels in India. Goddess traditions have encompassed a full spectrum from virgins to Great Mothers to dark underworld Goddesses of death and destruction. Cross-listed with RLST 5420 and WGST 4420/5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4440 - Concepts of the Soul (3 Credits)
Asks the questions: What is the nature of the human being? What makes us "human?" Do humans have a "soul?" What is its nature? Is it different from the "spirit?" What is its ultimate fate? Examines the various theories put forward by philosophers of both Eastern and Western traditions. Cross-listed with RLST 5440 and PHIL 4470, 5470. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4460 - Death and Concepts of Afterlife (3 Credits)
Examines how the major religious traditions approach the issue of death. Where the Egyptians were fascinated by death, their Mesopotamian and Hebrew neighbors saw no kind of experience continuing after death. Concepts of the Final Judgment Day and the end of the world follow in Zoroastrianism, Christianity, and Islam, while Indian religions developed a sophisticated theory of reincarnation and the "art of dying." Finally, we will turn to Chinese belief in ancestral spirits. Cross-listed with RLST 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4462 - Islam in Modern History (3 Credits)
This course studies Islamic thought and practice over the last two centuries in terms of major historical processes that have operated at local, national, and global scales. Cross-listed with RLST 5462, HIST 4462, HIST 5462. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4480 - Perspectives on Good and Evil (3 Credits)
Examines "problem of evil" as formulated in the philosophical tradition. Presents classical formulation of the problem, traditional solutions & classical critiques of each answer. Considers perspectives of various religious orientations, which deal differently with the question of suffering. Cross-listed with PHIL 4480/5480, RLST 5480. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

RLST 4500 - Religion and Politics (3 Credits)
Exploration of: (1) theoretical perspectives on the relationship between religion and politics; (2) causes of and justifications for the historical development of the Western separation of "church and state;" (3) contemporary responses to and analyses of this separation; and (4) several current debates about public policy in America that reveal tensions between these two spheres. Cross-listed with PSCI 4057, 5057 and RLST 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4710 - Women and Religion (3 Credits)
A sociological exploration of the contemporary roles of women in religion. Course examines American and world religious groups with an eye to women's involvement. Considers how women have changed these traditions as they take on leadership roles and discusses the tensions that arise within these traditions as a result of their expanded participation. Cross-listed with HUMN 5710, SSCI 4710/5710, WGST 4710/5710, RLST 5710. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4730 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. This course assumes that students have completed at least 9 hours of literature coursework. Cross-listed with ENGL 4510/5510, RLST 5730 and WGST 4510/5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

RLST 4840 - Independent Study: RLST (1-3 Credits)
Various topics in religious studies pursued in independent research. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Typically Offered: Fall, Spring, Summer.

RLST 4850 - Family Systems Therapy, Religion and Spirituality (3 Credits)
This course examines how the intersection between different religious and spiritual frameworks affects family systems. A strengths-based ecological perspective, family therapy theories and family systems theories will be used to understand religious and spiritual frameworks in working with families in schools and communities. Cross-listed with HDFR 4850. Max hours: 3 Credits.
Grading Basis: Letter Grade

RLST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Research & Eval Methods (RSEM)

RSEM 4001 - Special Topics (3 Credits)
Specific topics vary from semester to semester. Cross-listed with RSEM 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade

RSEM 4100 - Research and Statistics in Families and Human Development (3 Credits)
This course will prepare students to read, critique, and conceptualize research on families and human development. Statistical concepts will be taught along with examination of statistical studies. The second half emphasizes qualitative studies employing ethnographic and case study methodologies. Max hours: 3 Credits.
Grading Basis: Letter Grade

RSEM 4120 - Introduction to Research Methods (3 Credits)
This is a survey course that examines the purposes of research, the methods of quantitative, qualitative, and mixed research, and the processes involved in research studies. The primary aims of this course are to improve your skills as an informed consumer of research and to provide you with the skills to conduct your own research. Prereq: RSEM 4100. Cross-listed with RSEM 5120. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RSEM 4100.

Risk Management (RISK)

RISK 1000 - Introduction to Risk Management and Insurance Careers (1 Credit)
This course introduces students to the many and varied career opportunities in the risk management and insurance industry via visiting industry professionals and on-site industry visits. The course meets 1 hour each week. No co-credit with RISK 1001. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

RISK 1001 - Careers in Risk Management (1 Credit)
This course introduces high school students to the many and varied opportunities in the risk management and insurance industry via visiting professionals and on-site industry visits. This course meets during the summer semester. It is pass/fail. This course is equivalent to RISK 1000 Introduction to Risk Management and Insurance Careers in content. Note: Must be a high school student or recent high school graduate to enroll. CU Denver students cannot enroll. No co-credit with RISK 1000. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory

RISK 3809 - Introduction to Risk Management (3 Credits)
This course introduces students to the fundamentals of risk and risk management for businesses and individuals. Corporate risk management techniques covered range from insurance to enterprise risk management. Personal risks discussed range from unemployment to retirement. Prereq: FNCE 3000. Insurance carrier operations are also considered. Restriction: junior/senior standing required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: FNCE 3000. Restriction: Restricted to undergraduate Business majors at a junior standing or higher.
Typically Offered: Fall, Spring, Summer.

RISK 3949 - Experiential Learning in RMI Industry (3 Credits)
This course connects students to risk management service providers through the Risk Management and Insurance (RMI) Program. The students will intern with a specific provider. The RMI program and faculty will supervise and monitor tasks and assignments, and coordinate with the providers to maximize the learning experience. Restriction: junior/senior standing required. Max hours: 3 Credits.
Grading Basis: Satisfactory/Unsatisfactory
Restriction: Restricted to Juniors and Seniors only.

RISK 4129 - Practical Enterprise Risk Management (3 Credits)
Enterprise RM involves identifying the risks and opportunities faced by a firm, assessing them, developing and implementing a plan to address them, and then monitoring progress. Students will learn the basics of ERM while working with risk management professionals to develop and present such a plan to an ongoing business. Cross-listed with RISK 6129. Max hours: 3 Credits.
Grading Basis: Letter Grade
Coreq: FNCE 3500
Typically Offered: Fall, Spring.

RISK 4209 - Cyber Risk Management (3 Credits)
Computer networks and the data that travels upon them are under constant and increasing attack. This course will focus on a discussion of how state and non-state actors utilize this form of asymmetrical warfare to infiltrate government and corporate networks, risk management responds and risk strategies apply. Cross-listed with RISK 6209. Restriction: junior/senior standing or instructor permission. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restrictions: Restricted to Junior standing or higher.

RISK 4309 - Strategic Risk Management (3 Credits)
Strategic risk management (SRM) seeks to manage the risks inherent in a company's strategy, the risks to its plans to add value to its owners and society by raising its return on equity, allowing the company to compete successfully across a wider array of business environments, acting when its competitors cannot, and reducing its 'risk of ruin.' Because the future is unknown, SRM is charged with identifying and managing unknown uncertainties. The challenge of doing this makes for a fascinating course. Cross-listed with RISK 6309. Prereq: RISK 3809 and RISK 4809. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 and RISK 4809.

RISK 4409 - Employee Benefits and Workforce Risk Management (3 Credits)
The course surveys an array of popular employee benefit programs to attract, protect, and retain valued employees. It also focusses on risk management programs that invest in human capital and address the downside risks of employing a workforce. Restriction: Junior or Senior standing. Cross-listed with RISK 6409 and MGMT 4460/6760. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Junior or Senior standing

RISK 4509 - Global Risk Management (3 Credits)
This course is designed to study how risk is transferred globally. The course will include travel to London, which is the home to many of the world's largest insurers and reinsurers. While in London, we will visit and have presentations from insurance brokers, companies, Lloyds of London, and reinsurers. Prereq: One RISK course. Restriction: Junior or Senior standing. Cross-listed with RISK 6509. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: One RISK course Restriction: Restricted to students with junior/senior standing.

RISK 4609 - Claims Management (3 Credits)
This course will provide an overview of the claims process in the Property and Casualty Insurance world. Students will learn about basic claims handling for personal and commercial claims as well as how to determine coverage and legal issues. Prereq: RISK 3809 with a grade of at least C (GPA 2.0). Restriction: Junior/Senior standing required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 with a grade of at least C (GPA 2.0) Restriction: Junior/Senior standing required

RISK 4709 - Life and Health Insurance (3 Credits)
This course introduces students to life and health insurance concepts and policy types with an emphasis on insurance planning for individuals and businesses. The insurance industry and trends within it are also explored. Prereq: RISK 3809 and FNCE 3000 with a grade of at least C (GPA 2.0). Restriction: Junior/Senior standing required. Cross-listed with RISK 6709. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: RISK 3809 and FNCE 3000 with a grade of at least C (GPA 2.0)
Restriction: Junior/Senior standing required

RISK 4809 - Property & Casualty Insurance (3 Credits)
Students learn the fundamentals and uses of personal and commercial property and casualty insurance, including cost and pricing issues. Insurance company financial management and current trends in the insurance industry are also explored. Restriction: Junior/Senior Standing, or permission of the instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Junior/Senior Standing

RISK 4909 - Corporate Risk Management (3 Credits)
This course provides an overview of the corporate risk management process. It considers the ways companies identify their risk exposures, the tools used to measure and mitigate those exposures including the latest developments in alternative risk transfer, and ultimately, how risk management adds value to the firm. Prereq: RISK 3809 with a grade of C or higher. Coreq: FNCE 3500. Restriction: Restricted to undergraduate Business majors with junior standing or higher. Cross-listed with FNCE 4909/6909 and RISK 6909. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prerequisite: RISK 3809 with a grade of C or higher. Corequisite: FNCE 3500. Restriction: Restricted to undergraduate Business majors with junior standing or higher.

School Library Program (SCHL)

SCHL 4030 - Cultivating Learning Skills in Library Leadership (3 Credits)
In an increasingly shifting world and work force, both our student and adults will need to demonstrate learning skills to thrive in K-12 and post-secondary world. Teacher-librarians are guides for students and staff in ALL learning skills. Collaboration, innovative thinking, critical thinking and are areas of library leadership covered. Cross-listed with SCHL 5030. Max hours: 3 Credits.
Grading Basis: Letter Grade

SCHL 4160 - Managing School Libraries (3 Credits)
Case studies in the organization and administration of school library and instructional leadership of programs and projects. Topics include project management, personnel administration, budget development, management strategies, copyright and intellectual freedom. Cross-listed with SCHL5160. Max hours: 3 Credits.
Grading Basis: Letter Grade

School Psychology (SPSY)

SPSY 2200 - Child and Adolescent Mental Health in Schools and Communities (3 Credits)
Introduces students to child and adolescent mental health and treatment, with a focus on trends in children's mental health, evidence-based treatments for childhood mental health challenges, and child mental health careers. Course includes an emphasis on school-based mental health practices. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Behavioral Sciences.

Science Education (SCED)

SCED 4004 - Elementary Science Teaching (3 Credits)
This course explores issues in elementary school science learning and teaching. Teacher candidates will develop knowledge of the nature of science and science content, engage in scientific inquiry, work to identify student conceptions, and plan and enact science instruction. Cross-listed with SCED 5004. Restriction: Professional Year Admission required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SCED 4050 - Introduction to Science Teaching and Learning (2 Credits)
Focus on conceptual development, conceptual change, collaborative learning, students' conceptions of various topics in science, practical issues encountered in facilitating learning, managing the classroom, formative and summative assessment, and differentiating instruction in a collaborative environment. Seminar for Learning Assistants. Student must be serving as a Learning Assistant in the CU Denver LA program. Max hours: 2 Credits.
Grading Basis: Letter Grade

SCED 4340 - Equity & Culture in Science Education: Local/Global (3 Credits)
This course examines literature in science education related to issues of culture and equity. Topics will be framed by an understanding of equity in diverse classrooms and how it informs research, curriculum and instruction. Cross-listed with SCED 5340 and ENVS 5340. Max hours: 3 Credits.
Grading Basis: Letter Grade

SCED 4350 - Issues and Trends in Science Education (3 Credits)
Explores the current issues and trends in science education related to theory, pedagogy, practices, curriculum, and other contemporary topics. Cross-listed with SCED 5350. Max hours: 3 Credits.
Grading Basis: Letter Grade

SCED 4400 - Theory and Pedagogy of Science Learning (3 Credits)
Examines current issues, strategies, materials, and technology related to the teaching and learning of science at the middle and secondary school levels. Science curriculum, teachers' pedagogical content knowledge, and research in science education are investigated. Cross-listed with SCED 5400. Restriction: Professional Year Admission required. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SCED 4401 - Inquiry Science Pedagogy and Practices (3 Credits)
An in-depth study of inquiry science pedagogy and practices and how inquiry science supports standards-based education to make science accessible to ALL learners. The course provides a review of research on pedagogy and practices that support student understanding, problem solving and creativity through the use of inquiry science. Prereq: Concurrent enrollment in an internship or permission of instructor is required. Cross-listed with SCED 5401. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

Science, Technology, Engineering & Math Education (STME)

STME 1000 - STEM Methods (3 Credits)
This course provides an overview of STEM practices and philosophies in PK-12 education. STEM trends, foundations of practice, and resources are examined. Max hours: 3 Credits.
Grading Basis: Letter Grade

STME 4001 - Planning for Learning in Mathematics and Science (3 Credits)
This course explores aspects of complex curriculum and instructional concepts through the lens of mathematics and science educators. A focus will include: Socio-cultural learning theory in Math and Science; standards-based instruction; instructional design; formative & summative assessment, and differentiation so that meaningful instruction becomes accessible to all students. Cross-listed with STME 5001. Max hours: 3 Credits.
Grading Basis: Letter Grade

STME 4051 - STEM Capstone: Secondary Education (3 Credits)
This course provides Secondary STEM Education students with a capstone learning experience that integrates knowledge of STEM content, students, and school context into socially-just and culturally responsive practices. Cross-listed with STME 5051. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

Social Justice (SJUS)

SJUS 2000 - Foundations in Social Justice (3 Credits)
Examines how well the United States, Colorado and Denver are doing in addressing issues of social justice, such as inequality and environmental degradation. Explores various modes of democratic participation -- electoral politics, community activism, and lifestyle changes -- in advancing social justice. Term offered: fall. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS1
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS1, Soc Behav Sci:Econ or Pol.
Typically Offered: Fall.

SJUS 2010 - Social Justice: Theories, Narratives, and Technologies (3 Credits)
How can citizens of a democracy address social justice issues? This course examines theoretical perspectives relevant to social justice, the narratives which express and question social order, and the technologies which alternately shape and reflect local, regional, and global cultures. Max hours: 3 Credits.
Grading Basis: Letter Grade

SJUS 3050 - Special Topics: Social Justice (1-3 Credits)
Special Topics in Social Justice will be covered. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

SJUS 3939 - Internship (1-12 Credits)
Internship/experiential learning involving work in the community that is centered upon social justice and which includes a reflective component and some type of public dissemination. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SJUS 4000 - Social Justice Capstone (3 Credits)
Students design and carry out research projects that address important civic issues in collaboration with community partners and present their findings to the partners and academic community. This course also involves reflection on social justice means and goals. Note: Students may not receive credit for SJUS 4000 if they have already received credit for SJUS 4001 and may not receive credit for SJUS 4001 if they have already received credit for SJUS 4000. Prereq: Junior standing or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Additional Information: Upper Division; Credit.

SJUS 4001 - Social Justice Senior Project (3 Credits)
Students design and carry out research projects that address important civic issues in collaboration with community partners and present their findings to the partners and academic community. This course also involves reflection on social justice means and goals. This is an individually structured version of SJUS 4000 so students may not receive credit for SJUS 4001 if they have already received credit for SJUS 4000 and may not receive credit for SJUS 4000 if they have already received credit for SJUS 4001. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Max hours: 3 Credits.
Grading Basis: Letter Grade

SJUS 4050 - Special Topics: Social Justice (3 Credits)
Special Topics in Social Justice will be covered. Cross-listed with SJUS 5050. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

SJUS 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SSCI 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SJUS 4840 - Independent Study (3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SJUS 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Social Sciences (SSCI)

SSCI 3939 - Internship (1-12 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SSCI 4025 - Legal Advocacy/Engagement (3 Credits)
This course is an introduction to litigation practice skills in the context of cutting-edge litigation to create social change. Students will participate in mock litigation activities including conducting legal research, writing briefs, deposing witnesses, and making oral argument. The course will assist students in understanding basic legal advocacy while exploring the ways in which the legal system facilitates or stymies social change. The class is designed to be highly interactive, with a strong emphasis on learningby-doing and collaborative problem-solving. It is intended for students with a strong interest in attending law school who are committed to preparing themselves for that experience by working with material that maybe initially unfamiliar or daunting. If students undertake that challenge, they can expect to leave the class better prepared for law school and knowledgeable about how law is used to achieve social change. Note: Law Studies students should take this course as one of the last courses for the minor. Max hours: 3 Credits.
Grading Basis: Letter Grade

SSCI 4050 - Special Topics in Law Studies (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of law within the social sciences from various theoretical and research perspectives. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4060 - Topics in Law Studies: Constitutional Thought (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of constitutional thought as related to law studies. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4070 - Topics in Law Studies: Social Context of Law (3-6 Credits)
These topics courses are concerned with specialized aspects of the study of the social context of law. These courses are interdisciplinary and serve as a forum for discussion specific to students interested in law studies. Term offered: fall, spring. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring.

SSCI 4251 - Introduction to Legal Studies (3 Credits)
A survey of the United States legal system, including lawmaking powers, jurisdiction, court procedures, professional ethics and major principles of business law, contracts, estates and probate, family law, property and torts. Cross-listed with HUMN 4251/HUMN 5251/SSCI 5251. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SSCI 4325 - First Amendment: Theory and Context (3 Credits)
First Amendment jurisprudence including free speech/responsibility, sedition/seditious libel/dissent, prior restraints, time/place/manner restrictions, hate/intimidating speech, defamation, privacy/security tensions, intellectual property/public good, advertising, corporate speech, sexual expression, and public status of religion. Cross-listed with HUMN 4325, HUMN 5325, SSCI 5325, PSCI 4325 and PSCI 5325. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SSCI 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SJUS 4770, WGST 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SSCI 4840 - Independent Study (1-3 Credits)
Directed study based on a specific subfield of social sciences. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

SSCI 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

Sociology (SOCY)

SOCY 1001 - Understanding the Social World (3 Credits)
This survey course provides an introduction to the sociological study of society, including patterns of social relationships, social interaction, and culture. Typical course topics include socialization, the family, criminology, deviance, inequalities, sex and gender, race and ethnicity, health and medicine, self and identities, and globalization. Students gain an understanding of how organizations, institutions, and structures of society shape individual and group experiences. Max hours: 3 Credits.
GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.

SOCY 1011 - From Killer Apps to Killer Bots: Technology and Social Change (3 Credits)
A young college student updates her social media page to stay in touch with family and high school friends while making new friends on campus. An upstart automobile manufacturer builds a factory manned by robots to produce electronic vehicles designed to reduce the environmental impact of automobiles. The military deploys battalions of unmanned drones to engage with adversaries without risking the lives of their soldiers. Technology mediates nearly all aspects of social life, from reproduction and parenting to crime control and heath care. This course is designed to provide students an introduction to the different social dimensions of technological innovation as well as the theoretical and methodological tools sociologists use to study them. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences.

SOCY 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: spring, fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall, Spring.

SOCY 2001 - Inequalities in Social World (3 Credits)
Introduces students to critical sociological perspectives on social inequality. Major sociological factors contributing to the production and reproduction of inequality in various social organizations and institutions are analyzed. Prereq: SOCY 1001 or permission of the instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001
Typically Offered: Fall, Spring.

SOCY 2440 - Deviance and Social Control (3 Credits)
This class explores different forms of deviance and ways in which deviant categories are created,and examines sociological theories of deviance, social order, and social power. The course also addresses how different groups gain control over social definitions and the consequences these definitions have in the form of norms, laws, and informal social sanctions. The impact of these definitions for individuals also is considered, namely for how people construct and manage their identities. Topics covered include drug smuggling, gang membership, computer hacking, shoplifting, homelessness, eating disorders, transability, BDSM, self-injury, and sex work. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SOCY 2462 - Introduction to Social Psychology (3 Credits)
Studies the development and functioning of persons, especially within a group context, and the dynamics of small groups. Emphasis on the import of symbols for human behavior, development of self-concepts, and processes of competition and cooperation in group dynamics. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-SS3
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Social Sciences; GT courses GT Pathways, GT-SS3, Soc Behav Sci:Hmn Behav, Cul.
Typically Offered: Fall, Spring, Summer.

SOCY 3001 - Urban Sociology (3 Credits)
Explores U.S. cities as built environments, cultural spaces, and sources of community. Topics include the history of urbanization; social and spatial organization of cities; race and residential segregation; suburbanization; and urban problems such as crime, environmental hazards, and gentrification. Prereq: Sophomore standing or higher. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3010 - Sociology of Human Sexuality (3 Credits)
Increases the understanding of differences in views of sexuality, specifically the link between sex and reproduction and its role as the motivation for gender roles and sex acts. Explores the history of sexuality, cross-cultural studies and primate modeling. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with WGST 3010. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3020 - Race and Ethnicity in the U.S. (3 Credits)
A sociological examination of race and ethnicity in contemporary U.S. society. Includes a focus on the nature and causes of prejudice and discrimination. Dominant-minority relations are examined, with an emphasis on current status of minority groups and issues. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, Cultural Diversity.
Typically Offered: Fall, Spring, Summer.

SOCY 3040 - Drugs, Alcohol & Society (3 Credits)
Explores our culture's relationship with drugs and alcohol from a sociological perspective, investigating all spheres of substance use: recreational, medicinal, instrumental, & religious. Examines our long turbulent history with these chemicals, and ways in which they have shaped our society. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3050 - Sociology of Education (3 Credits)
Drawing from theories in the sociology of education, this course evaluates the relationship between race, ethnicity, gender, class, immigration status and educational experiences, aspirations, and outcomes. Topics include socialization, tracking, educational policy, college access, and educational equity. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3080 - Sex and Gender (3 Credits)
Causes and consequences of sex role differentiation at the individual, group and societal levels. Current issues related to changing norms and values concerning gender in modern society are examined. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with WGST 3080. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3115 - Quantitative Methods & Analysis (4 Credits)
This course provides students with a basic understanding of survey methods and statistical analysis. In addition to learning the basics of inferential statistics and sampling methods, students will conduct their own survey research, analyze data, and produce reports. Prereq: SOCY 1001 with a C- or higher. Term offered: fall, spring, summer. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001 with a C- or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3119 - Qualitative Methods (4 Credits)
This course focuses on the development of skills involved in designing qualitative research studies, collecting and analyzing qualitative data and evaluating qualitative research. Primary focus is on ethnography, in-depth interviewing, and content analysis. Students read, analyze, and conduct qualitative research. Prereq: SOCY 1001 with a C- or higher. Term offered: fall, spring. Max hours: 4 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001 with a C- or higher.
Typically Offered: Fall, Spring.

SOCY 3140 - Sociological Theory (3 Credits)
An overview of major sociological theories and concepts. The emergence of the discipline and the contemporary development of sociological theories are examined. Prereq: SOCY 1001. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SOCY 1001
Typically Offered: Fall, Spring.

SOCY 3300 - Social Problems (3 Credits)
Explores how societies define and attempt to solve "social problems." Possible topics: income disparities, race/ethnic relations, gender inequality, and sexuality, in addition to the relationship between these issues and social institutions such as education, religion, health care, and criminal justice. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3440 - Medical Sociology (3 Credits)
This course covers key issues in population health and emphasizes how sociological perspectives both challenge and augment biomedical perspectives on health and health care. We also discuss the social causes and consequences of race/ethnic, sex, and socioeconomic disparities in health. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with PBHL 3440. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3490 - Criminology (3 Credits)
Theories, nature and causes of crime as a social phenomenon. Processes of making laws, breaking laws, and reaction toward the breaking of laws. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

SOCY 3500 - Topics in Sociology (1-3 Credits)
Special topics in sociology to be selected by the instructor. Note: Can be taken more than once when topics vary. Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3510 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3520 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3530 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3540 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3550 - Topics in Sociology (1-3 Credits)
Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3570 - Death & Dying: Social & Medical Perspectives (3 Credits)
Focusing on death, dying and bereavement using medical and social perspectives, this course explores how illness, prolonged dying and sudden death impact care providers, families and communities. Discussion, film, readings and music address the connection of social and medical issues. Cross-listed with HEHM 3570. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SOCY 3650 - Sociology of Music (3 Credits)
Focuses on the meaning/use of music in society. Explores censorship, organization of the recording industry, sociocultural contexts in which music is produced/distributed/listened to and the relationship between music and technology along with musical applications and associations. Prereq: sophomore standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3697 - Contemporary Asian American Experience (3 Credits)
Examines the contemporary Asian American experience, including the adaptation of new immigrants or refugees, economic and educational problems, ethnic identity, intermarriage, anti-Asian discrimination and other civil rights issues, and recent political activism. Prereq: sophomore standing or higher or permission of instructor. Cross-listed with ETST 3697. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Spring.

SOCY 3700 - Families and Society (3 Credits)
This course explores multiple dimensions of family as a social institution. Using a critical approach, we examine historical, cultural, and political views about families. We consider multiple forms of contemporary families, discuss the many issues facing families, and study how families and family life have become politicized. Cross-listed with WGST 3700. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring, Summer.

SOCY 3720 - Global Perspectives on Social Issues (3 Credits)
Various cultural and social frameworks are used in a sociological examination and international comparison of select social issues, such as globalization, terrorism, inequality and discrimination. Analysis of selected issues across cultures explores how societal and cultural characteristics shape these issues. Prereq: sophomore standing or higher or permission of instructor. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Additional Information: Denver Core Requirement, International Perspectives.
Typically Offered: Fall, Spring, Summer.

SOCY 3750 - Animals and Society (3 Credits)
An examination into the category of "animal" as a social construct and the relationship between humans and non-human animals, which produces consequences of difference and subsequent inequality. The course utilizes different sociological perspectives to examine the social patterns, processes, and institutions that establish our lived experiences with non-human animals. Prereq: Sophomore standing or higher or by instructor permission. Max hours: 3 Credits
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.

SOCY 3840 - Independent Study: SOCY (1-3 Credits)
Prereq: sophomore standing or permission of the instructor. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Sophomore standing or higher.

SOCY 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: sophomore standing or higher or permission of instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SOCY 3995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Additional Information: Global Education Study Abroad.

SOCY 4020 - Race, Culture and Immigration (3 Credits)
In this course, we will consider the social and legal construction of race and immigration. We will also explore how immigrants have been racialized both historically and in the current moment. In addition, we will consider the role of culture in shaping the immigrant experience and immigrant outcomes. Restriction: Junior standing or higher or instructor permission. Cross-listed with SOCY 5020, ETST 4020 and ETST 5020. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4050 - Health Disparities (3 Credits)
This course focuses on social, economic, and political factors that shape the uneven distribution of health and illness in the United States. Social determinants of health are explored, including socioeconomic status, race and ethnicity, neighborhood environments, social relationships, and gender. Cross-listed with SOCY 5050. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SOCY 4110 - Sociology of Health Care (3 Credits)
Examines U.S. health care institutions and issues such as rising costs, the effects of class, racial and gender inequality, professionalization and monopolization of roles, construction of illness and health, managed care, for-profit health care, and ethics of health care decisions. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5110. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4220 - Population Change and Analysis (3 Credits)
Concepts of population change, methods of analysis, and applications to contemporary social issues. Topics include age and sex distributions, fertility, mortality, and migration, and the social causes and consequences of these phenomena. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5220. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4270 - Social Meanings of Reproduction (3 Credits)
Reproduction involves more than biological processes, assuming symbolic, political, and ideological meanings. This course examines contested meanings of reproduction, including how people experience reproduction, controversies over who should reproduce (and under what circumstances), and how public policy mediates these conflicts. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5270, WGST 4270 and WGST 5270. Term offered: fall. Max hours 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4290 - Aging, Society and Social Policy (3 Credits)
A sociological examination of central issues (e.g., work, retirement, family support, health) pertaining to the aging population. Heterogeneity in aging, as shaped by gender, race, ethnicity and social class is addressed, as well as policies pertaining to the adult population. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5290. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4340 - Juvenile Delinquency (3 Credits)
Factors involved in delinquent behavior. Problems of adjustment for delinquents, and factors in treatment and post-treatment adjustment. Major theories covered include strain theory, social learning theory, control theory, and labeling theory. Course also reviews methods for testing these theories. Prereq: junior standing or higher or permission of the instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4440 - Poverty and Social Inequality (3 Credits)
Investigates the distribution of wealth, income, and economic power in the United States with a focus on social institutions and factors that shape inequality. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5440. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4460 - Hate Groups and Group Violence (3 Credits)
Social sciences help us understand the phenomena of hate groups and group violence and contribute toward their elimination. Examples are examined using theoretical perspectives on different levels of analysis and within different areas of research. Prereq: Junior standing or permission of the instructor. Cross-listed with SOCY 5460. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4590 - Crime, Justice, and the City (3 Credits)
In this course, we will ask why inequality, crime, and police are unevenly spread across cities. We will examine why crime varies by neighborhood, whether place-based policing is racially biased, and why prisons are filled with people from just a few zip codes. We will study racial and economic segregation, gentrification, white flight, and suburbanization in the context of criminal justice. Spatial analysis is a growing field combining geography, sociology, and criminology. We will study it by reading cutting-edge researchers who use mapping, interviews, statistical analysis, and ethnography. Restriction: Restricted to students with Junior standing or higher or with instructor permission. Cross-listed with SOCY 5590. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

SOCY 4610 - Sociology of Religion (3 Credits)
This course introduces students to the nature and functions of religion in society, emphasizing western religions in the U.S. Students will develop and apply an understanding of classic and modern sociological theories of religion to current events and disciplinary developments. Cross-listed with SOCY 5610, RLST 4020, RLST 5020. Prereq: junior standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4640 - Sociology of Childhood and Adolescence (3 Credits)
An in-depth overview of the theories and research regarding the life course understanding of infancy, childhood and adolescence. Children's lives and cultures in relation to adults and their transition from childhood to adolescence are studied. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5640. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4650 - Sociology of Adulthood and Aging (3 Credits)
Examination of the adult life course—post-adolescence to death, focusing on key social transitions of adulthood (e.g., independence from parents, marriage, retirement), and historical, institutional, and social factors that create variation in their timing, meaning, and individuals' role experiences. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5650. Term offered: spring. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4690 - Crime and Inequality Over the Life Course (3 Credits)
Life-course perspective on inequality and crime. Studies transitions, trajectories and turning points as key features of the life course. Considers how inequalities and criminal behavior are shaped by timing of experiences, historical and geographic contexts, others' lives, and human agency. Restriction: Restricted to Graduate and Graduate Non-Degree majors. Cross-listed with SOCY 5690. Term offered: fall. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Graduate and Graduate Non-Degree Majors
Typically Offered: Fall.

SOCY 4700 - Sociology of Law (3 Credits)
Consideration of the formulation, interpretation, and legitimacy of legal rules within the context of social organization. The examination of a major social institution in modern society. Prereq: junior standing or higher or permission of instructor. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4740 - Courts & Society (3 Credits)
Courts are a centerpiece of modern legal systems that mediate social relationships and people's relationship to the state. This course explores the connection between courts and democratic society by considering the operation and evolution of courts in the U.S. Cross-listed with SOCY 5740. Restriction: Restricted to Junior standing or above. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Spring.

SOCY 4770 - Advanced Topics in Sociology (1-3 Credits)
Advanced study of special topics in sociology to be selected by the instructor. Note: May be repeated for credit when topics vary. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5770. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SOCY 4774 - Advanced Topics in Sociology (3 Credits)
Advanced study of special topics in sociology to be selected by the instructor. Note: May be repeated for credit when topics vary. Prereq: Junior standing or permission of the instructor. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SOCY 4780 - Violence in Relationships (3 Credits)
Course focuses on the study of violence among individuals involved in intimate relationships; factors in society such as norms, laws and institutions that are related to creating violence among intimates; and social policies, prevention, intervention and treatment programs. Prereq: junior standing or higher or permission of instructor. Cross-listed with SOCY 5780, WGST 4780 and WGST 5780. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall.

SOCY 4830 - Senior Capstone: Worklife Practices & Policies (3 Credits)
Introduces students to tools and develops skills to facilitate internship and job search. Students gain understanding of work contexts, exploring employment laws and policies, dynamics of race and gender in job searching, and research on careers and job negotiation. Prereq: Must have earned a minimum of 75 credits. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SOCY 4840 - Independent Study: SOCY (1-3 Credits)
Prereq: junior standing or higher or permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Prereq: junior standing or higher

SOCY 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Prereq: junior standing or higher. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq: junior standing or higher

SOCY 4910 - Research Practicum (1-3 Credits)
Practical experiences for undergraduates in application of principles of research design and data processing to a social research problem selected by the instructor. Prereq: junior standing or higher or permission of instructor. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: junior standing or higher

SOCY 4995 - Global Study Topics (3-6 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Department consent required. Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

Spanish (SPAN)

SPAN 1000 - Introduction to Cultures of the Spanish Speaking World (3 Credits)
Introduces students to the Spanish-speaking cultures of Spain, Latin America, and the United States through a historical overview and a focus on contemporary politics and culture. Note: Taught in English. Term offered: fall, spring, summer. Max hours: 3 Credits. GT: Course is approved by the Colorado Dept of Higher Education for statewide guaranteed transfer, GT-AH4
Grading Basis: Letter Grade
Additional Information: GT courses GT Pathways, GT-AH4, Arts Hum: Foreign Languages; Denver Core Requirement, Humanities.
Typically Offered: Fall, Spring, Summer.

SPAN 1010 - Beginning Spanish I (5 Credits)
Introduces basic Spanish pronunciation and grammar, useful vocabulary and idioms. Readings and class discussions relating to the Hispanic world. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Term offered: fall, spring, summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Additional Information: Credit; Lower Division.
Typically Offered: Fall, Spring, Summer.

SPAN 1011 - Intensive Spanish (5 Credits)
SPAN 1011/1021 combines both semesters of the first year, and meets the needs of highly motivated students of the language and culture. Note: Students who have studied Spanish previously should not enroll in SPAN 1011/1021 without first consulting a department advisor. Cross-listed with SPAN 1021. Term offere: summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

SPAN 1020 - Beginning Spanish II (5 Credits)
(Continuation of SPAN 1010.) Further development of listening, speaking, reading and writing skills. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 1010 or equivalent, or have taken one year of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 1010 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall, spring, summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 1021 - Intensive Spanish (5 Credits)
SPAN 1011/1021 combines both semesters of the first year, and meets the needs of highly motivated students of the language and culture. Note: Students who have studied Spanish previously should not enroll in SPAN 1011/1021 without first consulting a department advisor. Cross-listed with SPAN 1011. Term offered: summer. Max hours: 5 Credits.
Grading Basis: Letter Grade
Typically Offered: Summer.

SPAN 1070 - Spanish Medical Conversation for Beginners (3 Credits)
SPAN 1070 is a beginner's Spanish class designed to help a variety of medical personnel and students, who don't have a previous knowledge of the Spanish language, to improve their communication with their Spanish speaking patients or clients. It involves learning and practicing basic and essential conversation such as greetings, asking information during medical visits or emergency care, giving recommendations, speaking about medical records and other health related issues. The class requires weekly practice of fundamental medical interviews in Spanish, while improving general fluency and cultural competence
Grading Basis: Letter Grade

SPAN 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students
Typically Offered: Fall.

SPAN 1995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Repeatable. Max hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

SPAN 2070 - Spanish Medical Conversation for Beginners II (3 Credits)
This course seeks to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview, while improving linguistic and cultural competence. The objectives of this course are to enhance competency in speaking, reading, listening and writing; and to develop a broad knowledge of Hispanic culture, all within the field of Healthcare Studies. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 2110 - Second Year Spanish I (3 Credits)
Continues the development of skills acquired in 1010 and 1020. Readings deal with Hispanic culture and current topics from Spain and Latin America. Development of informal oral and written expression. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 1020 or equivalent, or have taken two years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 1020 is recommended for success in this course. This course is not intended for native speakers. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 2120 - Second Year Spanish II (3 Credits)
Continues the development of skills acquired in SPAN 1010, 1020 and 2110, together with a review of grammar. Readings deal with Hispanic culture and literature. Development of informal oral and written expression. SPAN 2120 satisfies the fourth-semester language requirement at most graduate schools. Note: Students may not enroll in any lower division (1000/2000) language skills course in which their level of proficiency exceeds that of the course. Students placing into a course through any means other than following the regular sequence must consult with an appropriate faculty member of the Dept. of Modern Languages prior to enrollment. Note: This course assumes that students have passed SPAN 2110 or equivalent, or have taken three years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2110 is recommended for success in this course. This course is not intended for native speakers. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 2130 - Current Topics in the Spanish-Speaking World (3 Credits)
A fourth-semester course (parallel to 2120) designed for students majoring or minoring in international affairs, but open to anyone wishing to continue the study of Spanish beyond 2110. Along with development of language skills and grammar review, class work involves contemporary topics in cultural, political, economic and social affairs. Note: This course assumes that students have passed SPAN 2110 or equivalent, or have taken three years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2110 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Sophomore standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Restriction: Sophomore standing or higher.

SPAN 2995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

SPAN 3010 - Spanish Composition I (3 Credits)
Expansion and reinforcement of oral and written skills in Spanish at an advanced level, in a broad cultural context. Oral activities are individual and in groups. Topics are introduced through oral activities, and are then used for written assignments. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: fall, spring, summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring, Summer.

SPAN 3020 - Spanish Composition II (3 Credits)
(Continuation of SPAN 3010.) Development of oral and written skills in Spanish in preparation for taking other advanced courses. Topics of increasing complexity are selected from current publications in Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3025 - Writing for Latinos (3 Credits)
Writing class for students who grew up speaking Spanish, especially those who grew up in the United States. Focuses on different types of formal writing, spelling, difficult grammar points and writing as a process. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3026 - Writing for Latinos II (3 Credits)
This course is a continuation of SPAN 3025 (Writing for Latinos) designed for heritage speakers of Spanish, that is, for students who grew up in the United States and have learned Spanish at home. The goal for this course is to continue the development of the student's bilingual range to achieve communicative, linguistic and sociolinguistic competence in speaking, listening, reading and writing Spanish. Special emphasis will be given to grammar, appropriate vocabulary for formal registers, and academic writing of increased complexity. Students' work involves reading, composing, writing and proof reading different type of essays on topics related to students' cultural background, the Spanish speaking world, and Spanish for academic proposes. A multi-faceted approach to the language will help the student continue to gain a solid grasp of the Spanish language and all of its varieties and awareness of the diversity of the Hispanic communities both here in the US as well as in the Spanish speaking world. Recommended preparation: Completion of SPAN 2120 with a C or higher or consultation with an advisor in the CU Denver Department of Modern Languages or the instructor of record, for placement. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3030 - Spanish Oral Proficiency (3 Credits)
This course is designed to help students acquire an "Intermediate High" level of proficiency in speaking and understanding spoken Spanish. Content-based instruction in small groups. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. This course is not intended for heritage Spanish speakers. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to SPAN-BA or SPAN-MIN students within the College of Liberal Arts and Sciences
Typically Offered: Fall.

SPAN 3050 - Advanced Spanish Grammar (3 Credits)
A close study of the structure of the language and practice in its written use. Note: Recommended for those intending to teach Spanish at the secondary level. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3060 - Hispanic Phonetics: Theory and Practice (3 Credits)
Explores the phonetics of spoken Spanish throughout the world. Theoretical content: classification of all Spanish sounds and how they are affected and change according to their phonetic environment and region. Practical features: pronunciation and strategies teaching English speakers to pronounce Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3101 - Introduction to the Study of Literature (3 Credits)
The basic terms and skills needed to analyze both the themes and form of literary works, together with an introduction to research skills. All literary examples come from Hispanic literature. Note: SPAN 3252 is a prerequisite (previous or concurrent) to all other literature courses taught in Spanish. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. This course is a prerequisite/corequisite for all other literature courses taught in Spanish. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3199 - Topics in Spanish Literature (3 Credits)
Varying topics in Hispanic literature appropriate the 3000 level, not otherwise covered by regular courses. Note: Taught in Spanish for major and minor credit. May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3101

SPAN 3212 - Spanish American Culture and Civilization (3 Credits)
Surveys the social, political, economic, religious, literary, and artistic life of Spanish America from the conquest to the present. Note: Taught in Spanish for major and minor credit. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3213 - Contemporary Latin American Culture and Institutions (3 Credits)
Introduction to contemporary Latin American culture and institutions, with emphasis on the social, economic and political institutions of Spanish-speaking countries. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3221 - Culture and Civilization of Spain I (3 Credits)
From prehistoric times through Phoenician, Greek, Roman, and Visigothic eras to the Moorish invasion in 711; the Arab period; the Reconquest; the Catholic Kings; the Imperial Period; and the Inquisition. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3222 - Culture and Civilization of Spain II (3 Credits)
(Continuation of 3221.) Studies the social, intellectual, and artistic development of Spain from the time of the Bourbons (18th century) through the civil war of 1936, and the Franco regime to the restoration of democracy under Juan Carlos I and the present day. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPAN 3223 - Contemporary Spanish Culture and Institutions (3 Credits)
A study of contemporary Iberian culture, including an emphasis on modern business institutions and practices. This course can be applied to any Spanish major track but is specifically required for the International Language and Culture for the Professions track. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3225 - Special Topics In Hispanic Culture (3 Credits)
Variable topics in advanced studies in Spanish and Latin American culture. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Typically Offered: Fall, Spring.

SPAN 3230 - Ibero-American Cultures through Film (3 Credits)
A study of the Ibero-American cultures through their most representative films. Films will be windows to access the complexities and the contradictions lived in Ibero-American countries regarding a set of contemporary issues, such as violence, linguistic diversity, religious beliefs, sexuality, politics, history, social class, and globalization. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3240 - Food Metaphors: Ibero-American Cuisine and Culture (3 Credits)
Intermediate/advanced Spanish students study interactions between Ibero-American cuisine and cultures. While improving Spanish skills, students learn how to cook Hispanic meals, study scholarly materials on food and cultures, watch films featuring meals as protagonists and read literary works of fiction and poetry. Taught in Spanish. Note: This course assumes that students have passed SPAN 2120 or 2130 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 or 2130 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3270 - Bilingual Communities: Spanish as a Language of Contact (3 Credits)
Explores bilingualism by tracing the series of linguistic and ethnic contacts that converted Castilian from a Latin dialect to the language of the Spanish empire, the primary language of Latin America, and a fast-growing language in the United States. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 3400 - Survey of Spanish Literature I (3 Credits)
The most important works in the literature of Spain from the early Hispano-Arabic lyric poems through the golden age of the 17th century. Prereq or coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3410 - Survey of Spanish Literature II (3 Credits)
The most important works in the literature of Spain from the 18th century to the present. Prereq or coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3510 - Survey of Spanish American Literature II (3 Credits)
The most important works in the literature of Spanish America from the late 19th century to the present. Prereq or Coreq: SPAN 3101 with a C- or higher. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101 with a C- or higher.

SPAN 3550 - Spanish American Short Story (3 Credits)
The Spanish American short story from its beginnings in the romantic period of the 19th century to the present. Prereq or Coreq: SPAN 3101. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 3700 - Spanish for International Business I (3 Credits)
Development of proficiency in oral and written Spanish as used in business and industry throughout the Hispanic world, together with an increased awareness of social, economic, and political conditions affecting business transactions, particularly in long-term operations. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3710 - Spanish for International Business II (3 Credits)
(Continuation of SPAN 3700.) Further development of oral and written language proficiency, together with further examination of pertinent social, economic, and political conditions of the Hispanic world. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. SPAN 3700 desirable. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3730 - Special Topics in Spanish for the Professions (3 Credits)
Variable topics in Spanish for the Professions not otherwise covered in regular course offerings. Note: May be taken more than once, provided that the topic is different each time. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring, fall. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Typically Offered: Fall, Spring.

SPAN 3740 - Spanish for the Healthcare Professions I (3 Credits)
This course seeks to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview while improving linguisitc and intercultural competence. Note: SPAN 2120 or proficiency in Spanish equivalent to a fourth semester of college-level coursework is strongly recommended for optimal student success. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3750 - Spanish for the Healthcare Professions II (3 Credits)
SPAN 3750 is a continuation of SPAN 3740. Students will continue to enhance the communication between healthcare professionals and their Spanish speaking patients or clients. It entails practice of the medical interview while improving linguistic and intercultural competence. Note: SPAN 2120 or proficiency in Spanish equivalent to a fourth semester of collegelevel coursework is strongly recommended for optimal student success. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3782 - Introduction to Translation I (3 Credits)
The first course in a two-semester sequence that introduces the methodology and practice of written translation. Thorough analysis of source texts precedes translation into target language. Students must demonstrate third-year competence in Spanish and advanced writing skills in English. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 3792 - Introduction to Translation II (3 Credits)
Second course in a two-semester sequence (see SPAN 3782). Note: This course assumes that students have passed SPAN 2120 or equivalent, or have taken four years of high school Spanish, or possess equivalent proficiency. A grade of C- or higher in SPAN 2120 is recommended for success in this course. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

SPAN 3840 - Independent Study: SPAN (1-3 Credits)
Repeatable. Department consent required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

SPAN 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Note: students must work with the Experiential Learning Center advising to complete a course contract and gain approval. Prereq: Junior standing. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: junior standing or higher

SPAN 3995 - Global Study Topics (1-15 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education. Term offered: summer. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.
Additional Information: Global Education Study Abroad.
Typically Offered: Summer.

SPAN 4010 - History of the Spanish Language (3 Credits)
Studies the history of the Spanish language, both internal and external, from the language's Latin roots to the present. Historical phonetics are emphasized, though all features of the language are discussed. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5010. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4020 - Spanish Sociolinguistics (3 Credits)
Studies the Spanish language in its social context. In addition to specific regional linguistic features, social factors such as geography, social class, politics, race, gender, economics, education and history are discussed as determiners of the linguistic landscape. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5020. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4030 - The Learning and Teaching of Heritage Speakers (3 Credits)
Studies Spanish heritage speakers, including characteristics of how they learn and how best to teach them. Includes definitions of heritage speakers, strengths and weaknesses in learning Spanish, and attitudes of and towards heritage speakers in the classroom. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5030. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Fall, Spring.

SPAN 4040 - Spanish Classroom Methods and Practice (3 Credits)
Focuses on the second language learning and teaching of Spanish in a classroom context. Looks at topics including second language vocabulary, pronunciation, grammar, and types of feed back. Practical component of activity design and learning/teaching strategies. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5040. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Spring.

SPAN 4060 - Dialects of the Spanish-Speaking World (3 Credits)
Studies the geography of the Spanish language in those countries where it is spoken as a primary language. Includes a comparison of dialect features and a study of factors that contribute to the diversity of the Spanish language. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5060. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4070 - Spanish Applied Linguistics & Second Language Acquisition (3 Credits)
This course is a survey of various areas of the field of linguistics in general (e.g. morphology, syntax, semantics, pragmatics, etc.) as well as specific aspects of the structure (and acquisition) of the Spanish language. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5070. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Student must have completed ANY 3000-level course in SPAN with a C or higher.
Typically Offered: Fall, Spring.

SPAN 4076 - Spanish in Colorado (3 Credits)
A study of the Spanish language in its social context in Colorado and New Mexico. We will study historical factors as well as current social factors that contribute to the use of the Spanish language in this region. Prereq: Students must have completed ANY 3000-level course in SPAN with a C or higher. Cross-listed with SPAN 5076. Term offered: summer. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Summer.

SPAN 4080 - Spanish in the United States (3 Credits)
A study of the Spanish language in its social context as a language of the United States. In addition to studying bilingualism and language traits, factors such as race, gender, class, education, nationality, age, generation and language attitudes are considered. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5080. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4099 - Special Topics in Linguistics (3 Credits)
Varying topics in Hispanic language and literature not otherwise covered by regular courses. Note: May be taken more than once provided that the topics are different each time. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3060. Cross-listed with SPAN 5099. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3060
Typically Offered: Fall, Spring.

SPAN 4110 - Contemporary Spanish Literature (3 Credits)
Major works published since the Spanish Civil War, which ended in 1939. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5110. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4130 - Medieval Spanish Literature (3 Credits)
Examines Spanish literature from the jarchas and the Cid through the Celestina in the context of the reconquest. Considers the construction of the Christian knight as a hero and the corresponding representations of women, Jews and Muslims. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5130. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4150 - Masterpieces of Spanish Literature (3 Credits)
The most enduring works in the literature of Spain across the centuries. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5150. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4170 - Golden Age Drama (3 Credits)
Spanish drama of the 16th and 17th centuries, the period of greatest dramatic productivity in the nation's history. Readings include selections from Lope de Vega, Tirso de Molina, Calderon de La Barca, and others. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5170. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4180 - Modernism (3 Credits)
Examines the first real flowering of Spanish American literature, from about 1880 to 1910. The dominant genres of the period were the short story, the essay and lyric poetry. Readings come from Dario, Jose Enrique Rodo, Manuel Gutierrez Najera, Manuel Diaz Rodriquez and others. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5180. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4190 - Nineteenth-Century Spanish Novel (3 Credits)
The Spanish novel in one of its most productive periods, beginning with romanticism and carrying through the realist and naturalist movements. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5190. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4300 - Generation of 1898 (3 Credits)
Spanish literature from around the turn of the century through the first third of the 20th century, reflecting the deep intellectual and cultural foment occasioned in part by Spain's loss of the Spanish-American War of 1898. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5300. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4320 - Interculturalism and Transnationalism in Modern Spain (3 Credits)
Students will examine experiences of Spaniards living in different parts of the world and the circumstances of either foreigners or migrants living in Spain, through their visual and literary texts, film, photographs, documentaries and other products of current popular culture, such as contemporary television. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5320. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4330 - Modern Culture of Spain through Film and Narrative (3 Credits)
Culture of modern Spain studied through Spanish film. The death of military dictator Francisco Franco opened the process for the recuperation of a usurped democratic, representational system that has become the basis of a cultural and economic resurgence. Taught in Spanish. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5330. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4340 - Race, Class, and Gender in Spanish Golden Age Literature (3 Credits)
Explores works of various genres in relation to their social and political contexts in 16th and 17th century Spain, emphasizing the cultural attitudes toward race, class, and gender that inform them. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5340 and WGST 4540/5540. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4350 - Don Quijote (3 Credits)
The complete Don Quijote in Spanish, focusing on its historical, social, and philosophic context, and its role in the emergence of the modern novel. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5350. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4360 - Women and the Spanish Civil War (3 Credits)
Focuses on the role of Spanish women during the Second Republic, the Civil War, the dark & starving postwar, & the inescapable exile that was a consequence of the conflict. Discusses several texts & films that portray this silenced odyssey, as well as historical, ideological & cultural documents of critical value & significance. Cross-listed with SPAN 5360. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPAN 4380 - Romanticism in Spain (3 Credits)
The romantic movement in 19th century Spain through plays, poems, essays. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5380. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4399 - Special Topics: Spanish Peninsular Literature (3 Credits)
Varying topics in Spanish Peninsular Literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Prereq or Coreq: SPAN 3101. Term offered: spring, fall. Repeatable. Max Hours: 6 hours.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4401 - Survey of Spanish-American Literature I: Pre-1898 (3 Credits)
The most important works in the literature of Spanish America from the Colonial Period to the Late 19th Century. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5401. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101

SPAN 4411 - Contemporary Spanish-American Novel (3 Credits)
The novel in Spanish America since the Second World War, the period in which the greatest number and quality of works has been produced. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5411. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4450 - Masterpieces of Spanish-American Literature (3 Credits)
Focuses on a limited number of outstanding works in Spanish-American literature across the centuries. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5450. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4501 - Borges: An Introduction to His Labyrinths (3 Credits)
The works of Jorge Luis Borges (short stories, essays, poetry, translations, essays anthologies, lectures) will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5501. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4512 - Contemporary Argentine Short Stories (3 Credits)
The short stories by extraordinary Argentine writers, such as Jorges Luis Borges, Silvina Ocampo, Julio Cortazar, Griselda Gambaro, Adolfo Bioy Casares, and Manuel Muica Laineza, among others, will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5512. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4521 - Mexican Literature I: pre-Columbian and Colonial (3 Credits)
Survey of Mexican literature and culture from pre-Columbian times to the colonial era. Prereq or Coreq: SPAN 3101. Note: This course may count for the International Studies major or minor. See your INTS advisor for more information. Cross-listed with SPAN 5521. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4522 - Mexican Literature II: 19th to 21st Centuries (3 Credits)
Survey of Mexican literature and culture from the early modern to contemporary literature. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5522. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4525 - Orientalisms In The Hispanic Tradition (3 Credits)
Advanced studies of orientalism in the Hispanic tradition: the Hispano-Arabic cultural heritage in Early Medieval Spain and in contemporary Hispanic cultures, as well as the influence of other eastern religions and cultures, such as Judaism or Buddhism. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5525. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4541 - Unexpected Lives: Ibero-American Queer Cinema (3 Credits)
Provocative films, by courageous Ibero-American filmmakers, on controversial topics (homosexuality, Lesbianism, bisexualism, transgender individuals, feminism, etc.) will be studied to teach students to think globally as well as critically about LGTBQ individuals in the context of Ibero-American cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5541. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4550 - Garcia Marquez: Words of Magic (3 Credits)
The works of Gabriel Garcia Marquez (stories, short novels, novels, newspaper articles, interviews, lectures) will be studied with the goals of teaching students to think globally as well as critically about literature and other cultures. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5550. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4590 - Ibero-American Thought (3 Credits)
The course examines philosophical works by essayists, literary critics, and cultural thinkers from Spanish-American countries and the Iberian Peninsula. Besides reading philosophical works in their original form, students will read scholarly commentaries to deepen their understanding of those works. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5590. Term offered: spring, fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4599 - Special Topics: Latin American Literature (3 Credits)
Varying topics in Latin American literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Term offered: spring, fall. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

SPAN 4600 - Seminar in Spanish Creative Writing: Poetry and Short Fiction (3 Credits)
A capstone writing course. Semester writing project will be collected poems and short stories. Prereq: junior standing or higher. Cross-listed with SPAN 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

SPAN 4690 - Methods of Teaching Modern Languages (3 Credits)
Studies the methods and practices of teaching modern languages. Note: requirement for language majors in the teacher certification program, School of Education, CU Denver. Note: This course is taught in English and does not fulfill the foreign language proficiency requirement for the College of Liberal Arts and Sciences. Cross-listed with MLNG 4690, MLNG 5690, SPAN 5690, FREN 4690, FREN 5690, GRMN 4690, GRMN 5690, CHIN 4690, CHIN 5690. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

SPAN 4691 - Methods of Teaching Modern Languages II (3 Credits)
A continuation of the study of modern language teaching methods. This second course has an emphasis on experiential learning through individual teaching demonstrations, class observations, as well as team teaching with experienced instructors. Cross-listed with MLNG 4691, MLNG 5691, SPAN 5691, FREN 4691, FREN 5691, GRMN 4691, GRMN 5691, CHIN 4691, CHIN 5691. Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: MLNG 4690 or SPAN 4690 or FREN 4690 or GRMN 4690 or CHIN 4690
Typically Offered: Spring.

SPAN 4840 - Independent Study: SPAN (1-3 Credits)
Repeatable. Department consent required. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

SPAN 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

SPAN 4970 - Special Topics in Literature (3 Credits)
Varying topics in Hispanic literature not otherwise covered by regular courses. Note: May be taken more than once, provided that the topic is different each time. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 5970. Term offered: spring, fall. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

Special Education (SPED)

SPED 1030 - Understanding (dis)Ability in Contemporary Classrooms (3 Credits)
This course provides an overview of special education by examining the history of special education, construction of dis/ability, characteristics of individuals with disabilities, aspects of disproportionality, and introduction to evidence-based instructional practices. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 1400 - Universal Design Learning (3 Credits)
This course will introduce Universal Design for Learning (UDL), an important, contemporary educational philosophy, a set of principles & techniques that focus on strategies and tools to help ALL students by accommodating their differences in inclusive classroom settings. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SPED 4010 - Intentional Interventions for Exceptional Learners (3 Credits)
This course provides instructional strategies and interventions for students with a wide variety of disabilities. Implications for targeted and intensive interventions and assessment are considered. Cross-listed with SPED 5010. Restriction: Professional Year Admission required. Max hours: 3 Credits
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4030 - Understanding (dis)Ability in Contemporary Classrooms (3 Credits)
This course provides an overview of special education by examining the history of special education, construction of dis/ability, characteristics of individuals with disabilities, aspects of disproportionality, and introduction to evidence-based instructional practices. Prereq or Coreq: EDHD3930 or ECED4933 or ECED4934. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: EDHD3930 or ECED4933 or ECED4934

SPED 4140 - Assessment: Inquiry, Instruction, & Intervention (3 Credits)
Using a variety of assessment tools, students will focus on the educational assessment methods and procedures used in decision making and program planning for students with exceptional learning needs, with attention to pervasive issues pertaining to students from culturally and linguistically diverse backgrounds. Cross-listed with SPED 5140. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4151 - Slashing Stigmas: Promoting Positive Behaviors (3 Credits)
This course works to transform perspectives and practices related to supporting student behavior in classrooms. Students will learn important considerations related to culture, race, gender and socioeconomic status, as they intersect with behavior and social emotional development. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours or students in the Education Studies Minor. Cross-listed with SPED 5151. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours or students in the Education Minor EDST-MIN

SPED 4200 - Autism Spectrum Disorders (1 Credit)
The purpose of this academy is to provide the paraeducator with information and skills to assist paraeducators in the instruction of students with autism. It gives factual information to dispel the many myths that abound in this field and emphasizes the relationship between communication and behavior. It prepares paraeducators to make and use visual supports, to structure tasks and the environment and to provide appropriate supports for social skills instruction. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.

SPED 4300 - Family, Professional, and Community Collaboration (3 Credits)
Focuses on the development of competencies in consultation and collaboration. The overall purpose is to encourage the development of understanding and skills that enhance a teacher's ability to work and communicate effectively with school personnel, including paraprofessionals and parents. The goal of collaboration is to support and determine together the instructional scenarios that best meet the needs of students. Specific competencies include problem solving, conflict resolution, data collection or observation skills, conferencing, facilitating meetings, and interacting with others while respecting diverse discourses and multicultural backgrounds. Cross-listed with SPED 5300. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor.

SPED 4400 - Universal Design for Learning (UDL) (3 Credits)
This course introduces Universal Design for Learning (UDL), an important educational philosophy and set of principles & techniques that focuses on strategies and tools to help ALL students by accommodating their differences in inclusive classroom settings. Cross-listed with SPED 5000. Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 27 and 180 cumulative credit hours or students in the Education Minor.

SPED 4500 - Transition and Secondary Methods in Special Education (3 Credits)
This course provides school leaders and practitioner with an understanding of the special education transition process as specified by federal and state guidelines, as well as effective teaching and learning strategies for secondary youth with disabilities. Cross-listed with SPED 5500. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours, and Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours, and Professional Year Admission required.

SPED 4600 - Special Education Law: Ethics and Compliance (3 Credits)
Designed for school leaders and professionals to understand special education law and compare and contrast service delivery options . Cross-listed with SPED 5600. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 4710 - Significant Health Support Needs Academy (1 Credit)
Intends to prepare paraeducators with knowledge and skills needed for working with children with significant health support needs. Consisting of seven modules of varying length, this 15 clock hour academy focuses on training both the health aid and the significant health support needs professional. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4720 - Significant Supports for Challenging Behavior Academy (1 Credit)
This academy provides the paraeducator with the knowledge and skills needed for working with children who have significant behavior needs. The academy focuses on working with students who have challenging behaviors. The aim is to provide paraeducators with the basic understanding of behavior support and to provide them with the necessary skills to implement written behavior support plans. It is recommended that paraeducators complete the Behavior Management Academy prior to taking this course. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4730 - Significant Communication Support Needs Academy (1 Credit)
This academy provides the paraeducator with the knowledge and skills needed for working with children who have significant behavior needs. The academy focuses on working with students who have challenging behaviors. Its aim is to provide paraeducators with a basic understanding of behavior support and to provide them with the necessary skills to implement written behavior support plans. It is recommended that paraeducators complete the Behavior Management Academy prior to taking this course. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4740 - Intersections of Literacy, Culture, & Exceptionality (3 Credits)
This course provides a foundational understanding of the complex intersections between literacy, culture, language, learning, and students with (dis)abilities. A primary goal is to address the particular needs of culturally and linguistically diverse learners with exceptionalities, while also exploring the distinctions between language development and learning disabilities. Cross-listed with SPED 5740. Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in Education and Human Development with between 57 and 180 cumulative credit hours

SPED 4750 - Orientation to Special Education (1 Credit)
This 15 clock hour academy is designed to provide a basic introduction to special education and the needs of students who have disabilities. It includes introductory material regarding legal and historical foundations of special education, human growth and development, the nature of disabilities, and an introduction to the basic human needs that must be addressed. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4780 - Literacy Intervention for Exceptional Learners (3 Credits)
Provides the practitioner with an understanding of research-validated approaches, strategies, assessment tools and issues related to effective literacy instruction for students performing significantly below grade level. Cross-listed with SPED 5780. Max hours: 3 Credits.
Grading Basis: Letter Grade

SPED 4800 - Orientation to Early Intervention Services (1 Credit)
This academy provides Developmental Intervention Assistant (DI Assistant) an introduction to early intervention services under IDEA. Material regarding legal and historical foundations, human growth and development, and the nature of disabilities and their impact on infants and toddlers are introduced. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4805 - Fundamentals of the IFSP Process (1 Credit)
This academy provides Developmental Intervention Assistants an overview of the Individualized Family Service Plan (IFSP). It clarifies their role in the implementation of IFSP and also knowledge about the evaluation and assessment components of the IFSP process. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4810 - Early Intervention Teamwork (1 Credit)
This academy is designed for Developmental Intervention Assistants (DI Assistants) to work effectively in Early Intervention teams. Introductory materials regarding teamwork, delineation of DI Assistants 'and supervisors' roles and responsibilities as well as family centered practices are addressed. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4815 - Working with Families (1 Credit)
This academy provides the Developmental Intervention Assistant with information and skills to create and support Family Centered Practices. Focus on the concept of family and the impact of disability on the family is woven throughout the course. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4820 - Instructional Strategies for Early Intervention (1 Credit)
This academy assists the Developmental Intervention Assistant in examining the types of instructional strategies used in the Early Intervention programs. Focus is on building relationships, promoting engagement, and instructional support specifically in collecting data for the supervisor and IFSP team. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4825 - Promoting Social Emotional Development (1 Credit)
This academy focuses on the importance of infant/toddlers' social emotional development and support. The CSEFEL Pyramid Model, adapted for this course, is a conceptual framework of evidence-based practices addressing the promotion of social emotional development in early intervention programs. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4830 - Health Support Needs in Early Intervention (1 Credit)
This academy provides the DI Assistant with information and skills to support the health services related to the early intervention programs. Safety awareness and precautions are stressed as related to caring for infants/toddlers in their home and natural environments. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4835 - Language and Early Literacy Development (1 Credit)
This academy is designed for Developmental Intervention Assistant (DI Assistant) to work effectively with families as they support the early language and literacy development of their infants and toddlers with communication challenges. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4840 - Communication Support Needs Early Intervention (1 Credit)
This academy provides the Developmental Intervention Assistant with information and skills to learn characteristic language patterns for infants and toddlers. Focus on critical importance of child interactions as well as key intervention communication strategies for infants and toddlers. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4845 - Individualized Intervention Infants/Toddlers (1 Credit)
This academy, adapted from CSEFEL, introduces Developmental Intervention Assistants (DI Assistants) to basic knowledge of infants/toddlers with challenging behaviors. It provides necessary skills to implement written behavior support plans based on the IFSP under the supervision of Early Intervention professionals. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4850 - Transition to Age 3 (1 Credit)
This academy assists the Developmental Intervention Assistant in learning the elements of transition from Part C to Part B including the difference between an IFSP and IEP. Focus on the cultural and transition issues for the toddler and the family. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4855 - Interpersonal Skills for DI Assistants (1 Credit)
This academy provides the Developmental Intervention Assistant effective interpersonal skills necessary to work with Early Intervention teams. It addresses issues of diversity based on culture, experience, gender, etc. and examines the DI Assistants' roles in each aspect of the topics. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4860 - Personal Growth Development for DI Assistants (1 Credit)
This academy provides the Developmental Intervention Assistant with information and skills to identify and expand personal growth and improvement skills working in Early Intervention programs. The course covers stress-management strategies and uses creativity and flexibility in dealing with problematic situations. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4865 - Instructional & Assistive Technology in EI (1 Credit)
This academy assists the Developmental Intervention Assistants in examining various types of instructional and assistive technology used in early intervention programs. Focus is on technology used in the home and other natural environments to assist the infant/toddler and the family. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4870 - Autism Spectrum Disorder in Early Intervention (1 Credit)
This academy provides Developmental Intervention Assistants with information to assist the Early Intervention Professionals to implement instructions for infants/toddlers identified with autism. It offers participants knowledge of structured tasks environmental adaptations, and appropriate social skills for the infant/toddler and family. Max hours: 1 Credit.
Grading Basis: Letter Grade

SPED 4910 - Special Education Generalist Internship and Site Seminar I (1-8 Credits)
Special education teacher candidates engage in systematic observation of, participation in, design of and reflection on inclusive curricular, instruction and management practices. Graduated learning activities for each internship and time requirements are specified in the School Internship handbook and the Special Education Guidelines. In partner school, the site coordinator and site professor are responsible for coaching, supervision and site seminars. In internship outside partner school settings, cooperating teachers, district coordinators and/or university professors work with teacher candidates in the classroom and in seminars. Prereq: Completion of special education core or permission of instructor and advisor. Admission into the IPTE Program. Cross-listed with SPED 5910. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

SPED 4915 - Practicum For Developmental Intervention Assistant (2 Credits)
The Developmental Intervention Assistant will engage in systematic observation of, and participation in the delivery of early intervention services. Practicum Instructor will observe, coach and assess as per the performance criteria required for completing the DI Assistant portfolio. Prereq: SPED 4800, 4805, 4810, 4815, 4820, 4825, 4830, 4835, 4840, 4845, 4850, 4855, 4860, 4865, & 4870. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

SPED 4919 - CO-TOP Practicum (1-2 Credits)
The paraeducator engage in systematic observation of, and participation in instruction of management practices. The learning activities for each practicum are specified in the CO-TOP Practicum handbook and information sheet. Cooperating teachers, district coordinators and/or university-based supervision observe paraeducators in the classroom. Prereq: Completion of CO-TOP academies or permission of the CO-TOP Coordinator. Max hours: 2 Credits.
Grading Basis: Letter Grade

SPED 4931 - Internship & Learning Community I (2 Credits)
SPED 4931 is the first internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4932 - Internship & Learning Community II (2 Credits)
SPED 4932 is the second internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4933 - Internship & Learning Community III (6 Credits)
SPED 4933 is the final internship in a series of three completed during the professional year of the SPED program providing the necessary learning opportunities for candidates to gradually develop their practice to be licensed as a special education teacher. Restriction: Professional Year Admission required. Max hours: 6 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

SPED 4934 - Extended Internship & Learning Community (1-8 Credits)
Teacher candidates seeking Special Education licensure engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, they participate in the activities of a professional learning community. Repeatable. Cross-listed with SPED 5934. Max hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Sustainability (SUST)

SUST 3010 - Sustainability: Past, Present, and Future (3 Credits)
This course draws on theoretical perspectives to critically analyze contemporary environmental issues across ecological, sociocultural, historical, political and economic contexts. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

SUST 3011 - Toward a Sustainable Future (3 Credits)
This is the second of a two-course sequence that examines the interrelations among the historical, political, cultural, ecological, and economic aspects of contemporary environmental issues. SUST II provides students with theoretical perspectives on sustainability through a series of current, problem-oriented case studies. Note: this course assumes that students have completed 1 Natural Science Core course and 1 Social Science Core course. Max hours: 3 Credits.
Grading Basis: Letter Grade

SUST 3840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

SUST 3939 - Internship (1-3 Credits)
This course will provide internships with agencies, businesses and programs involved in initiatives aimed at promoting a sustainable future. Internships could include work with concerns involved in addressing specific environmental issues or with projects aimed at raising awareness of issues related to sustainability. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA
Typically Offered: Fall, Spring, Summer.

SUST 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor required. Term offered: fall, spring, summer. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Typically Offered: Fall, Spring, Summer.

SUST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Term offered: fall, spring, summer. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Typically Offered: Fall, Spring, Summer.

SUST 4960 - Capstone in Sustainability (3 Credits)
As the culmination of the Sustainability Minor, this course examines current research practices in sustainability and sustainability-related fields. Students work in teams to complete a sustainability/sustainability-related research paper and poster and present it to the campus community. Note: Topics variable depending on region under study, student interest, and faculty specialty. Prereq: SUST 3011. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: SUST 3011
Typically Offered: Fall.

SUST 4995 - Global Study Topics (1-9 Credits)
This course is reserved for CU Denver faculty-led study abroad experiences. The course topic will vary based on the location and course content. Students register through the Office of Global Education.
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

University Honors and Leadership (UNHL)

UNHL 1100 - The Life of the Mind (3 Credits)
The UNHL program was developed with the goal of creating academics with leadership skills to communicate their ideas and strong leaders with the ability to think critically, analyze issues from alternate perspectives and develop and communicate plausible solutions that take into consideration all points of view; the ideal end result of the program would be intelligent, ethical leaders and scholars in multiple fields of endeavor. The three areas around which the course will revolve are: a) Oil, b) Robots, c) Penicillin. Each of these topics allows multiple facets of a university education in the old sense to be explored from philosophy, history and art to chemistry, physics and engineering. There will be multiple means of exploration for each of these topics, from lectures and in-class discussions to field trips and engagement activities; there will be writing assignments in every phase that will focus on writing skills and writing for different audiences. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 2755 - UHL Seminar (1 Credit)
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 4 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 4.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 2840 - Independent Study (1-6 Credits)
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 2850 - Faculty-Mentored Research (1-6 Credits)
UNHL student research conducted under the supervision of UC Denver faculty. Prereq: Permission of sponsoring faculty mentor and UNHL Director. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 2939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Cumulative GPA of 3.0 or above and permission of UNHL Director/Associate Director. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3010 - Leadership Behavior: Historical and Contemporary Perspectives (3 Credits)
This course will provide students with an opportunity to integrate historical and contemporary issues in the study of leadership behavior. The course is based on leadership research and writing that reveals the leader as facilitator, collaborator, servant, and follower. The course will provide students with an opportunity to reflect, discuss, and write on topics and questions related to leadership and followership behavior. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3100 - Ethics & Leadership: An Introduction (3 Credits)
This one-semester ethics and leadership course will introduce students to the wide variety of some of the best leadership theories and their application to current ethical issues. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3110 - Leadership, Communication, and Conflict (3 Credits)
Leaders spend a significant amount of time managing conflict. This course is designed to explore the practical and theoretical basis of conflict and communication, and seeks to examine critical leadership processes that lead to the increased likelihood of organizational survival through successful conflict management. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3150 - Negotiation, Bargaining, and Leadership (3 Credits)
This course integrates leadership theory and practice within a principled negotiation philosophy. Students will develop lifelong negotiation skills that reflect a principled negotiation framework for conflict management and strategic bargaining. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3310 - Innovation, Cutting-Edge Knowledge, and Self-Guided Learning (3 Credits)
The purpose of this course is to familiarize students with cutting-edge knowledge in major scientific and technological fields, against the background of cultural and artistic creativity, and to establish habits of lifelong, self-guided learning. To enhance this process, relevant faculty will be invited to speak about innovation in their field, both in class and during the planned panel discussion. Prereq: UNHL 1100 and second- or third-year status in the UNHL program. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3501 - Love and Death in the Greek Classics (3 Credits)
This course introduces students to classical Greek literature, focusing on love and death in Homeric epic, lyric poetry, tragic drama, the history and social science of Thucydides, the comedies of Aristophanes, and Plato's philosophical dialogues. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3503 - Ethics, Academic Integrity, and Social Responsibility (3 Credits)
This course combines research and class discussions in such a way that theories, viewpoints, and practical proposals regarding ethics and its application to intellectual responsibility are understood in their own right as well as in relation to other human activities. One daunting task will be facing up to the challenge of how to use the increasingly powerful information tools provided by universities. In the last third of the semester, students will be asked to work in teams on projects dealing with current ethics controversies. Prereq: UNHL 1100; not open to students who have taken UNHL 3100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3504 - Representation and Transformation in Young Adult Fiction and Pop Culture (3 Credits)
Popular culture is transformative, and the stories you read and see when young can profoundly impact a reader's view of the world around them. At its best, Young Adult (YA) books and media challenge, enlighten, and inform the reader while simultaneously entertaining and engaging them. At its worst, YA literature and media reinforce stereotypes or ignore some groups entirely. This course will explore the transformation in how books and pop culture for young adults have been written and produced over the last 60 years. We will examine changing representations of characters, particularly around race, ethnicity, gender, class, and sexuality, how the problems these characters face have come to more realistically reflect the lived experiences of the readers, viewers, and consumers, and how changes in society have driven this transformation in YA books and media. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). \ Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).
Typically Offered: Fall, Spring.

UNHL 3530 - Making the Modern Environment (3 Credits)
Delve into how human societies have shaped the natural world. Interdisciplinary course asks how a distinctly modern environment was produced and discusses the origins of the contemporary environmental crisis. Analyzes historical contexts and scientific developments that have refashioned landscapes, altered human and ecological systems, and deeply affected ways of knowing and understanding environmental change. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3532 - Digital Democracy (3 Credits)
Digital information and communication technologies impact how societies govern themselves by structuring social interactions, communications, and decision-making. Ideally, in a democratic society, digital technologies should facilitate citizens' participation in government and governments' service to its citizens. This course explores questions about the compatibility of digital technology with democratic principles. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).
Typically Offered: Fall.

UNHL 3615 - How to Science (3 Credits)
What do scientists do all day? This seminar will turn the analytic lenses of science onto science itself. We're going to see how scientists have studied scientists and the practice of science. This will help us to better understand why science works the way it does, is structured the way it is, and why those questions matter. We'll engage with the history, philosophy, and sociology of science, and how those perspectives have been combined into modern approaches of "science and technology studies" (STS). We will address the theoretical bases and justifications for our current system, the pragmatic details of everyday practice, and several examples of how those have played out. Restriction: Current UNHL or UHLT students in good standing with the Honors Program. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3620 - Migration, Modernity, and Literacy (3 Credits)
An examination of the causes, consequences, difficulties, and enduring problems of migration in contemporary global society. Political, legal, and educational problems of modernity and mass migration are analyzed. Course work includes social scientific research into historical and contemporary migration flows. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3630 - Migration and Development (3 Credits)
The impact on societies across the globe of a record 214 million-plus migrants living outside of their countries of birth. An interdisciplinary overview of the historical roots, causes, and consequences in receiving and sending nations of contemporary international migration flows. Topics include brain gain and brain drain, gender differences, immigrant diasporas, remittances, acculturation, circular migration illegal immigrant flows, and transnational human trafficking. Focus on experiences in North America, Europe, the Middle East, and Southeast Asia. Students will have the opportunity to compare and contrast immigrant communities in the Denver region. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3755 - Honors and Leadership Seminar (1 Credit)
This course provides students in UHL with an overview of concepts and practices core to critical and creative thinking, tools for effective written and oral communication, and an introduction to key themes across diverse topics and multiple disciplines. Restriction: Must be admitted to the University Honors and Leadership Program. Repeatable. Max hours: 2 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 2.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3816 - Ethical Problems with Emerging Technologies (3 Credits)
This course identifies a number of the emerging technologies across various industries and disciplines, and seeks to understand the technologies and its practical applications in the real world, as well as any additional potential utilizations. It then explores the potential ethical challenges for both the developer and the industry, as well as for the nation in which it is developed, the U.S. and the world. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3827 - American Music, American Culture: Folk, Roots, and the Blues (3 Credits)
Explores 20th-century American history, integrating a multiplicity of cultural perspectives, regional identities, and musical events and personalities. We will explore the relatively recent history of race relations in this country, as well as cultural policies and changemakers throughout the development of the modern music industry. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3830 - Jazz in American Culture (3 Credits)
This class will explore the influence of jazz music (and related forms like ragtime and the blues) on American culture more generally. Specific topics to be explored include the Post-Reconstruction Race Politics, the Delta and the Great Migration, New Orleans, and the Harlem renaissance. Important figures of African-American literature, and Jazz & the Blues music will also be presented. Students will examine a multitude of literary and musical experiences through novels, short works, biographies, and listening. Prereq: UNHL 1100. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3837 - Representing Community in Literature, Drama, and Film (3 Credits)
This writing intensive course examines several artistic genres that illustrate and interrogate notions of community. Communities may include family, utopias, military, or towns, and students will be required to identify and investigate a community of their choosing. Community In the classroom is crucial to the class, and students will assign homework to each other in addition to presenting their work in class. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3839 - Athlete Activism in the US (3 Credits)
Activist athletes have worked for many decades to improve their sports, their countries, and their world. The risks they take are enormous and their personal rewards often minimal. This course will explore the history and culture of athlete activism as embodied in variety of struggles from access and labor conditions to health and safety within the sport to social justice in the world beyond. The course will consider the implications of the athletes' actions and evaluate the consequences. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3840 - Creativity and Social Change (3 Credits)
This course draws on historical cases and contemporary movements to examine the ways human creativity - broadly situated across artistic, scientific, and social activities - can foster social change. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3939 - Internship (1-3 Credits)
Experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Cumulative GPA of 3.0 or above and permission of UNHL Director/Associate Director. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3995 - Global Study (1-4 Credits)
UNHL Academic Honors track and Leadership Studies track. Travel study, with location and topics to be selected by the instructor. Prereq: UNHL 1100, 2755, and permission of the UNHL Director. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 3999 - Special Topics in Honors and Leadership (3 Credits)
Special Topics in the University Honors and leadership Program. Restriction: Must be a current University Honors and Leadership Program student, in good standing with the program. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 4420 - Health Behaviors, Markets, and Policy (3 Credits)
This course is focused on policies that affect the provision of health care, the consumption of health care, and health behaviors. Students will be exposed to research from a variety of disciplines on health care markets, the role of government, and the causes and consequences of risky health behaviors. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 4820 - Facts and Critical Thinking (3 Credits)
Intensive analysis of primary literature from across the sciences. Students will expand their understanding and appreciation of the scientific method and develop the ability to critically analyze and evaluate experimental design in both scientific and social contexts. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 4840 - Independent Study (1-6 Credits)
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 4850 - Faculty-Mentored Research (1-6 Credits)
UNHL student research conducted under the supervision of UC Denver faculty. Prereq: Permission of sponsoring faculty mentor and UNHL Director. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT). Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT).

UNHL 4991 - Senior Research Seminar (3 Credits)
Students will work collaboratively using multi-disciplinary approaches to explore social problems and identify solutions. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT) with Junior or Senior standing. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT) with Junior or Senior standing.
Typically Offered: Fall, Spring.

UNHL 4992 - Senior Seminar (1 Credit)
This seminar will allow students to work together to identify goals, skills, and accomplishments from their undergraduate educational experience. Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT) with Junior or Senior standing. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to students in the University Honors and Leaders Program (UNHL or UHLT) with Junior or Senior standing.
Typically Offered: Fall, Spring.

University Skills & Engagement (UNIV)

UNIV 1110 - College Success (1 Credit)
This first-year course supports students by fostering academic skills and strategies, university engagement, personal strengths and goals, and diversity awareness and inclusion. No co-credit with UNIV 1111. Restriction: Restricted to Freshman level students. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

UNIV 1111 - College Success (3 Credits)
This first-year course supports students by fostering academic skills and strategies, university engagement, personal strengths and goals, and diversity awareness and inclusion. No co-credit with UNIV 1110. Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

UNIV 1112 - College Success - Major and Career Exploration (1 Credit)
UNIV 1112 is designed for first-year college students and new transfer students who are navigating their major and career exploration process. This course explores college majors, examines career development theories, and introduces students to experiential learning opportunities. Students will connect to campus resources that support major and career exploration. Restriction: Restricted to first-year students and new transfer students with less than 30 credit hours. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

UNIV 2110 - Financial Literacy (1 Credit)
This financial literacy course is designed to alert, inform, and educate college students in the concepts of personal finance and money management. Students will develop the skills and strategies that promote personal and financial responsibility related to financial planning, saving, spending, credit and debt management, and much more. Restriction: Must be a sophomore-level student or have more than 15 credit hours completed. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Must be a sophomore-level student or have more than 15 credit hours completed.

UNIV 2111 - Wellness 101 (1 Credit)
This course supports First-Year, Transfer, and Second-Year students by fostering development and student understanding of the seven dimensions of wellness. This course features skills, strategies, resources, dispositions, and behaviors that lead to success as a college student. The focus of this course is around student wellness, and will integrate the seven dimensions of wellness: emotional, physical, spiritual, social, environmental, financial, and creative. Restriction: Must be a sophomore-level student or have more 15 credit hours completed. Max hours: 1 Credit.
Grading Basis: Letter Grade
Restriction: Must be a sophomore-level student or have more than 15 credit hours completed.

UNIV 3110 - Special Topics: Student Success and College Student Development (1 Credit)
This course is specifically designed to educate students to be effective student leaders. Emphasis will be placed on leadership skills, communication skills, group facilitation skills, customer service, institution policies and procedures, and academic and campus resources. Repeatable. Max hours: 1 Credit.
Grading Basis: Satisfactory/Unsatisfactory
Repeatable. Max Credits: 2.

Urban & Regional Planning (URPL)

URPL 3000 - Planning the Built Environment (3 Credits)
Learn the multidisciplinary field of urban planning, focusing on how to plan and design sustainably at multiple scales: site, neighborhood, city, region. We use lecture, discussion, and applied learning techniques, including fieldwork, mapping, case studies, guest practitioners, and in-class workshops. Restriction: Restricted to undergrads with junior standing or higher, or by instructor consent. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to undergrads with junior standing or higher, or by instructor consent.

URPL 4000 - Planning History and Theory (3 Credits)
This course offers a comprehensive review of the major historical and theoretical developments in planning; the human aspects of planning as a social, political, and community-oriented process; public engagement; social justice; planning leadership and advocacy; and the future of planning. Prereq: Senior standing by the start of the enrollment semester. Minimum cumulative GPA of 3.00. Please contact instructor for permissions to register in course. Cross-listed with URPL 5000. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing with a minimum cumulative GPA of 3.00.

URPL 4010 - Planning Methods (3 Credits)
This course focuses on the most commonly applied quantitative and qualitative methods used in planning; data organization and management principles; and various ways to collect, analyze, and communicate data as a fundamental component of the planning process. Restriction: Senior standing by the start of the enrollment semester. Minimum cumulative GPA of 3.00. Please contact instructor for permission to register in this course. Cross-listed with URPL 5010. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing with a minimum cumulative GPA of 3.00.
Typically Offered: Fall.

URPL 4550 - Transportation, Planning and Policy (3 Credits)
This course examines policy issues in urban transportation planning: how transportation system design and political/institutional contexts shape transportation decision-making; major modes of urban transportation; and the social, environmental, economic, energy, and health impacts of transportation systems. Restriction: Senior standing by the start of the enrollment semester. Minimum cumulative GPA of 3.00. Please contact instructor for permission to register in this course. Cross-listed with URPL 6550. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing with a minimum cumulative GPA of 3.00.
Typically Offered: Fall.

URPL 4555 - Transportation, Land Use and the Environment (3 Credits)
This course teaches how current transportation modes shape regions and how future transportation technologies might impact us. Topics include policy making and governance; land use interactions with transportation investments; climate change and resilience; energy use; environmental justice; and equity considerations. Restriction: Senior standing by the start of the enrollment semester. Minimum cumulative GPA of 3.00. Please contact instructor for permission to register in this course. Cross-listed with URPL 6555. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing with a minimum cumulative GPA of 3.00.
Typically Offered: Fall.

URPL 4600 - Regional Growth and Equity (3 Credits)
Explores the institutions, policies, laws, data, and funding that support planning for housing, transportation, infrastructure, and jobs at the regional scale with a focus on equity. Students will learn analytic techniques to study the labor market, economic growth and performance, transportation systems, and affordable housing strategies. Restriction: Senior standing by the start of the enrollment semester. Minimum cumulative GPA of 3.00. Please contact instructor for permission to register in this course. Cross-listed with URPL 6600. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: Senior standing with a minimum cumulative GPA of 3.00.
Typically Offered: Fall.

Urban Teacher Education (UEDU)

UEDU 1930 - Introduction to Socially Just Education (3 Credits)
This course examines sociological issues concerning urban schools, communities and provides an overview of school culture, diversity and social realities in American schools. Students will critically examine education issues that affect their lives, their community and classrooms throughout the country. Max hours: 3 Credits.
Grading Basis: Letter Grade

UEDU 1931 - Introduction to Socially Just Education: Social Action Plan (3 Credits)
This course examines sociological issues concerning urban schools, communities and provides an overview of school culture, diversity and social realities in American schools. Students will critically examine education issues that affect their lives, their community and classrooms throughout the country. Prereq: UEDU 1930. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: UEDU 1930.
Typically Offered: Spring.

UEDU 4040 - Planning for Learning (3 Credits)
This course explores multiple aspects of student learning: Including 1) standards-based instruction 2) cultural responsive instructional design, 3) assessment and data, and 4) differentiation in curriculum and instruction so that meaningful instruction becomes accessible to all students. Restriction: Professional Year Admission required. Cross-listed with 5040. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU or EDHD-BA-ECO

UEDU 4050 - Capstone: Planning, Instruction & Assessment (3 Credits)
The purpose of this course is to re-visit multiple aspects of instructional and curriculum design, implementation, and evaluation. The goal is to promote access to knowledge for all learners, including those who are diverse linguistically and culturally and those identified with special needs. Restriction: Professional Year Admission required. Cross-listed with UEDU 5050. Max hours: 3 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 3.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4052 - English/LA & Social Studies Capstone: Secondary Ed (3 Credits)
Through teaching units of instruction in school placements, secondary English/LA and Social Studies teacher candidates learn both unit and lesson design, assessment of student learning, and differentiation of curriculum and instruction to promote access to knowledge for all learners. Cross-listed with UEDU 5052. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4110 - Tchg Literacy in Eng Ed (3 Credits)
Designed to meet both Colorado Literacy Council & Colorado Performance-Based Standards for prospective secondary English/LA teachers concerning Knowledge of Literacy, the course provides knowledge and practice using specific literacy methods to enhance students' literacy development in English/LA/reading classrooms. Cross-listed with UEDU 5110. Max hours: 3 Credits.
Grading Basis: Letter Grade

UEDU 4464 - Methods of Teaching Social Studies (3 Credits)
One of two courses on linguistically and culturally relevant social studies teaching. Course content includes geography, economics, civics. Cross-listed with UEDU 5464. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4465 - Methods of Teaching History (3 Credits)
One of two courses on linguistically and culturally relevant history teaching. Cross-listed with UEDU 5465. Restriction: Professional Year Admission required. Max hours: 3 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4840 - Independent Study (1-3 Credits)
Independent Study in Urban Community Teacher Education, Topic of study varies according to project. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

UEDU 4845 - Special Topics: (1-5 Credits)
Course topics will vary depending on faculty and student interests. Repeatable. Max Hours: 15 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 15.

UEDU 4931 - Internship & Lrng Comm I (2 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Cross-listed with UEDU 5931. Restriction: Professional Year Admission required. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4932 - Internship & Lrng Comm II (2 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Restriction: Professional Year Admission required. Cross-listed with UEDU 5932. Max hours: 2 Credits.
Grading Basis: Letter Grade
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU

UEDU 4933 - Internship & Lrng Comm III (2-6 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, teacher candidates participate in the activities of a school community (the school, its classrooms and the community in which the school exists). Graduated learning activities for each internship and time requirements are specified in the program handbook. Restriction: Professional Year Admission required. Cross-listed with UEDU 5933. Repeatable. Max hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.
Professional Year Admission required. Students must be enrolled in one of the following plans: ECED-LICU or EGLH-LICU or ELED-LICU or FWLF-LICU or FWLS-LICU or MATH-LICU or MSMA-LICU or SCIG-LICU or SPED-LICU or SSSS-LICU
Typically Offered: Fall, Spring.

UEDU 4934 - Extended Internship & Learning Community (1-8 Credits)
Teacher candidates engage in systematic observation of, participation in, design of, and reflection on curricular, instructional, and management practices across the full range of educational programs within a school. Additionally, they participate in the activities of a professional learning community. Cross-listed with UEDU 5934. Repeatable. Max Hours: 8 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 8.

Women's Studies (WGST)

WGST 1050 - Introduction to Women's and Gender Studies (3 Credits)
This course provides an introduction to key concepts, themes and approaches to the interdisciplinary field of women's and gender studies. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 1111 - First Year Seminar (3 Credits)
Restriction: Restricted to Freshman level students. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Restricted to Freshman level students

WGST 2900 - Smart Girl Leadership Training and Practicum (3 Credits)
Provides leadership and mentoring training, and a practicum in which UCD students mentor teenagers in their community or school settings. Following completion of the training, students work as near-peer mentors and coaches with groups of teenage girls in the Denver community and apply the skills learned in their training. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 3010 - Sociology of Human Sexuality (3 Credits)
Increases the understanding of differences in views of sexuality, specifically the link between sex and reproduction and its role as the motivation for gender roles and sex acts. Explores the history of sexuality, cross-cultural studies and primate modeling. Cross-listed with SOCY 3010. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3020 - Gender, Sexuality and Race in American Popular Culture (3 Credits)
This course explores the impact of popular culture on the lived experience of diverse women and men in America. Students will examine how cultural media (including film, television, print ads, music & digital games) can both reproduce and challenge existing structural inequalities. Max hours: 3 Credits.
Grading Basis: Letter Grade
Additional Information: Denver Core Requirement, Cultural Diversity.

WGST 3080 - Sex and Gender (3 Credits)
Causes and consequences of sex role differentiation at the individual, group and societal levels. Current issues related to changing norms and values concerning gender in modern society are examined. Cross-listed with SOCY 3080. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3343 - Women & Gender in US History (3 Credits)
This course will explore women and gender as drivers of US history. From politics to popular culture, jobs to sexual empowerment, civil rights to economic restructuring, we will use gender as a lens to re-envision familiar stories about American history. Cross-listed with WGST 5343, HIST 3343, and HIST 5343. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3450 - Contemporary Women Writers (3 Credits)
Examines how women write about a specific theme, such as home, work, family, the "other," as well as how women's writing may differ from men's. Theme and genre vary. Prereq: sophomore standing or higher. Cross-listed with ENGL 3450. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Restriction: Sophomore standing or higher.
Typically Offered: Fall, Spring.

WGST 3700 - Families and Society (3 Credits)
This course explores multiple dimensions of family as a social institution. Using a critical approach, we examine historical, cultural, and political views about families. We consider multiple forms of contemporary families, discuss the many issues facing families, and study how families and family life have become politicized. Cross-listed with SOCY 3700. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 3840 - Independent Study: WGST (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 3939 - Internship (1-3 Credits)
Designed experiences involving application of specific, relevant concepts and skills in supervised employment situations. Prereq: Students must have junior standing and at least a 2.75 GPA and must work with Experiential Learning Center advising to complete a course contract and gain approval. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.
Prereq: Junior standing or higher and at least a 2.75 cumulative GPA

WGST 4010 - Special Topics in Women's and Gender Studies (1-3 Credits)
Examines current topics in the field of Women's studies and Gender studies. Topics vary from term to term. May be repeated as long as the topic is distinct and different from courses student has already received credit for. Repeatable. Max hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

WGST 4150 - Gender Politics in the Middle East: Beyond Orientalism & Islamism (3 Credits)
This course is about Middle Eastern women's subjectivity and various forms of agency. It explores the nexus of domestic, regional and international forces that shapes the lives of Middle Eastern women, in particular in the Algerian, Egyptian, Iranian, Israeli and Palestinian contexts. Far from being silent observers of the contests among these forces, as is often assumed, Middle Eastern women have been active actors in the public arena since the 19th century colonial encounter and the importation of the modern state to the region using an array of means to make their voices heard. Theirs were often more militant than those of their countrymen. The course is divided into two parts. The first part provides an overview of the theoretical notions discussed such as Orientalism, agency, colonialism and post-colonialism. Related to this theoretical section is a historical overview that is necessary to the understanding of the contemporary conditions of Middle Eastern women and the continuities and changes between past and present. The second part covers pressing topics in the lives of Middle Eastern women in the post-independence era such as the rise of Political Islam, the global trend of democratization, war and occupation. The emphasis in this section is on women as active participants in the debates surrounding these issues, rather than as objects of them. The readings assigned include both texts written by scholars from the region and by others from without. They provide analyses of the contexts within which Middle Eastern women's struggles take place. In addition, students will be exposed to materials produced by Middle Eastern women activists that express their own opinions and views in order to avoid misrepresentation and to reflect the diversity among them. Cross-listed with PSCI 4150. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4215 - Women's Rights, Human Rights: Global Perspectives (3 Credits)
Explores the global feminist movement's campaign to "engender" human rights. Examination of women's human-rights issues and the critique of this campaign as representing cultural imperialism. Prereq: 6 hours of political science or permission of instructor. Cross-listed with PSCI 4215. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4225 - Urban America (3 Credits)
This course will explore how Americans experienced their rapidly growing and changing cities during the past two hundred years. This course will cover a wide range of urban themes, including segregation and gentrification, self-invention and policing, ethnic gangs and race riots, skyscrapers and suburbia, and commercial sex and Hollywood. The course will ultimately chart how a range of Americans - including immigrants, teenagers, laborers, women, LGBTQ+ people, and people of color – all fought for their own "right to the city". Cross-listed with HIST 4225, HIST 5225, WGST 5225, GEOG 4625. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4230 - Women in the West (3 Credits)
Focuses on ways in which women, from the mid-19th century through the mid-20th century, of different races, classes, and ethnic background, have interacted and been active participants in the development of the western states. Cross-listed with HIST 4230, HIST 5230 and WGST 5230. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4248 - Gender, Development and Globalization (3 Credits)
Examining the cost and impact of globalization; not only on women and gender but economic equality, human movement and displacement, sustainable development and the environment. Highlighting the complexities of a highly interconnected world and intersectional nature of a globalized world, answering the question: Who Wins? Who Loses? Cross-listed with PSCI 4248, PSCI 5245 and WGST 5248. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4270 - Social Meanings of Reproduction (3 Credits)
Reproduction involves more than biological processes, assuming symbolic, political, and ideological meanings. This course examines contested meanings of reproduction, including how people experience reproduction, controversies over who should reproduce (and under what circumstances), and how public policy mediates these conflicts. Cross-listed with SOCY 4270, SOCY 5270 and WGST 5270. Prereq: junior standing or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

WGST 4303 - Sex and Gender in Modern Britain (3 Credits)
Examines modern British history by focusing on sex and gender as central aspects in people's lives. Considers the ways gender shapes the realms of politics, economics, society and culture in Britain from the 18th century to the present. Cross-listed with HIST 4303/5303 and WGST 5303. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4305 - Women of Color Feminisms (3 Credits)
This course is an overview of women of color feminist theorizing (thinking) and praxis (practice) in the U.S. We will explore these feminisms through the writing, art, and organizing efforts of women and trans, femme, and non-binary people of color with a focus on key themes and concepts including identity, difference, oppression, intersectionality, representation, violence, resistance, empowerment, solidarity, and coalition. Texts for the course highlight key issues in the feminist theorizing and praxis of Black, Latina/x, Chicana/x, Asian (American), Pacific Islander, Indigenous, and Arab (American) women and trans, femme, and non-binary people of color, especially the politics of identity and representation; structural oppressions and violences; and practices of survival, resistance, and activism. Not only will we examine how these feminists have critiqued oppression(s) based on race, class, gender, sexuality, nationality, and religion, (as well as how these systems of domination intersect), but what kinds of approaches, strategies, and changes these thinkers and activists have organized for and promoted. Cross-listed with WGST 5305, ETST 4305 and ETST 5305. Max hours: 3 Credits
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4306 - Survey of Feminist Thought (3 Credits)
Examines changes and continuities in feminist thought from the 18th century to the present, using historical and literary materials. Explores the ways that women's characteristics, experiences, and capabilities have been understood and challenged. Cross-listed with ENGL 4306, 5306, HIST 4306, 5306, WGST 5306. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4307 - History of Sexuality (3 Credits)
Explores the relationships between gender and norms, sexual practice, and ideas about sexuality in Europe and the United States. Examines how sex and sexuality have changed over time and how those changes relate to social, cultural, political and economic history. Cross-listed with HIST 4307/5307 and WGST 5307. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4308 - Contemporary Feminist Thought (3 Credits)
This course explores contemporary feminist thought in philosophy and literature in the 20th and 21st centuries. Topics include lesbianism, black feminism, Chicana feminism, transgender identity, women and work and others. Cross-listed with ENGL 4308, ENGL 5308, PHIL 4308, PHIL 5308, WGST 5308. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4345 - Gender, Science, and Medicine: 1600 to the Present (3 Credits)
Examines the ways science and medicine have both shaped and been shaped by ideas about gender. Pays particular attention to the relationship between scientific/medical ideas about the sexes and the social organization of gender. Cross-listed with HIST 4345/5345 and WGST 5345. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4420 - Goddess Traditions (3 Credits)
Explores the many forms which Goddesses have assumed through history, including the Neolithic Great Mother and her heiresses in the ancient Mediterranean cultures, such as: Isis, Ishtar, Demeter, Hecate, Aphrodite, Artemis, Athena and others, and their parallels in India. Goddess traditions have encompassed a full spectrum from virgins to Great Mothers to dark underworld Goddesses of death and destruction. Cross-listed with RLST 4420/5420 and WGST 5420. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4494 - Red and Blue America: U.S. History, 1973-Present (3 Credits)
This course explores American history during a period of immense cultural and political polarization. After 1973, the United States experienced the rise of the New Right, changing attitudes towards sexual "permissiveness," and rapid advancements in technology. Both "law-and-order" politics and the rights campaigns led by immigrants, women, people of color, and LGBTQ+ peoples all reshaped democracy. These developments in the United States, meanwhile, influenced and were shaped by the nation's "hot" and "cold" conflicts in Europe, Latin America, the Middle East, and the rest of the globe. Cross-listed with WGST 5494, HIST 4494, and HIST 5494. Term offered: fall. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall.

WGST 4500 - Feminist Philosophy (3 Credits)
Seminar on key debates & figures in historical & contemporary feminist philosophy. Topics may include: rights, embodiment, gender, sexuality, race, reason, & violence. Figures may include: Wollstonecraft, Stanton, Beauvoir, Judith Butler, and bell hooks. Cross-listed with WGST 5500, PHIL 4500 & 5500. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4510 - Whores and Saints: Medieval Women (3 Credits)
Studies how women are presented in texts, as well as works by women. Investigates the roles open to women and societal attitudes toward women, who were considered seductresses, saints, scholars and warriors in the middle ages. Prereq: Nine hours of literature courses or instructor permission. Cross-listed with ENGL 4510/5510, RLST 4730/5730 and WGST 5510. Term offered: spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Spring.

WGST 4511 - French Women Writers (3 Credits)
Designed to explore writings by French and Francophone women from the Middle Ages to the present. Addresses the question of what it means to be a woman and want to write. The selections include a wide variety of genres: autobiographical writings, stories, poems, manifestos, letters, political and historical documents. Note: This course assumes that students have passed FREN 3112 or 3122 or an equivalent course, plus one other 3000 level course in French. Cross-listed with FREN 4510/5510 and WGST 5511. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4540 - Race, Class, and Gender in Spanish Golden Age Literature (3 Credits)
Explores works of various genres in relation to their social and political contexts in 16th and 17th century Spain, emphasizing the cultural attitudes toward race, class, and gender that inform them. Prereq or Coreq: SPAN 3101. Cross-listed with SPAN 4340/5340 and WGST 5540. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq or Coreq: SPAN 3101
Typically Offered: Fall, Spring.

WGST 4555 - International Women's Resistance (3 Credits)
Examines local and international struggles of women to build peace and justice by resisting systems of inequality such as colonialism, racism, patriarchy, globalization, and religious intolerance. Cross-listed with PSCI 4555/5555, ETST 4555 and WGST 5555. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4564 - Gender and Politics (3 Credits)
Analysis of the political experience of women and of strategies for change. Emphasis on the U.S. Cross-listed with PSCI 4564. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4610 - Communication, Media, and Sex (3 Credits)
This class develops the tools to think critically about representations of sexuality and to understand the social construction of sexuality, the role of sexual representations in mass media and society, and the complex relationships between sexual acts, identities, and desires. Restriction: Restricted to class level Junior, Senior, or permission of instructor. Cross-listed with COMM 4610. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

WGST 4660 - Queer Media Studies (3 Credits)
Queer Media Studies, a discussion-based seminar, investigates the history of a variety of LGBTQ+ media — including news, film, television, comics, games, music, and the Internet. Students engage in a variety of media projects to explore LGBTQ+ histories, queer aspects of media production, reception, and media messages. Restriction: Restricted to students with junior standing or higher or permission from the instructor. Cross-listed with COMM 4660, COMM 5660, WGST 5660. Term offered: fall, spring. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher
Typically Offered: Fall, Spring.

WGST 4710 - Women and Religion (3 Credits)
A sociological exploration of the contemporary roles of women in religion. Course examines American and world religious groups with an eye to women's involvement. Considers how women have changed these traditions as they take on leadership roles and discusses the tensions that arise within these traditions as a result of their expanded participation. Cross-listed with HUMN 5710, SSCI 4710/5710, WGST 5710, RLST 4710/5710. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4770 - Selling Empires: The Art of Visual Propaganda (3 Credits)
Western empires disseminate political, social, economic & cultural practices through complex interplay of cultural practices. Visual production is a complex site for meaning making within imperialism. Examines how visual discourses operated to create meaning for audiences, through focus on postcolonial critique. Cross-listed with HUMN 4770, SJUS 4770, SSCI 4770, HUMN 5770, SJUS 5770, SSCI 5770, and WGST 5770. Max hours: 3 Credits.
Grading Basis: Letter Grade
Typically Offered: Fall, Spring.

WGST 4780 - Violence in Relationships (3 Credits)
Course focuses on the study of violence among individuals involved in intimate relationships; factors in society such as norms, laws and institutions that are related to creating violence among intimates; and social policies, prevention, intervention and treatment programs. Cross-listed with SOCY 4780, SOCY 5780 and WGST 5780. Prereq: junior standing or higher or permission of instructor. Max hours: 3 Credits.
Grading Basis: Letter Grade
Prereq: junior standing or higher

WGST 4827 - Women and the Law (3 Credits)
Examines the role of the courts in the development of public policy toward women; how the legal system affects the economic power, family roles, safety and political participation of women. Cross-listed with PSCI 4827 and ETST 4827. Max hours: 3 Credits.
Grading Basis: Letter Grade

WGST 4840 - Independent Study (1-3 Credits)
Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Prereq: permission of instructor. Repeatable. Max Hours: 12 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 12.

WGST 4880 - Directed Research (1-6 Credits)
Students will engage in original research projects supervised and mentored by faculty. Students must work with faculty prior to registration to develop a proposal for their project and receive permission to take this course. Note: Students must submit a special processing form completely filled out and signed by the student and faculty member, describing the course expectations, assignments and outcomes, to the CLAS undergraduate advising office for approval. Repeatable. Max Hours: 6 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 6.

WGST 4933 - Philosophy of Eros (3 Credits)
What does it mean to understand philosophy as an erotic activity? This question will be examined, first by studying Plato's dialogues-such as Lysis, Symposium and Republic-and then by reading texts from Sigmund Freud, Michael Foucault and others. Cross-listed with PHIL 4933/5933, WGST 5933, SSCI 5933 and HUMN 5933. Max hours: 3 Credits.
Grading Basis: Letter Grade

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